COMPUTER arts projects

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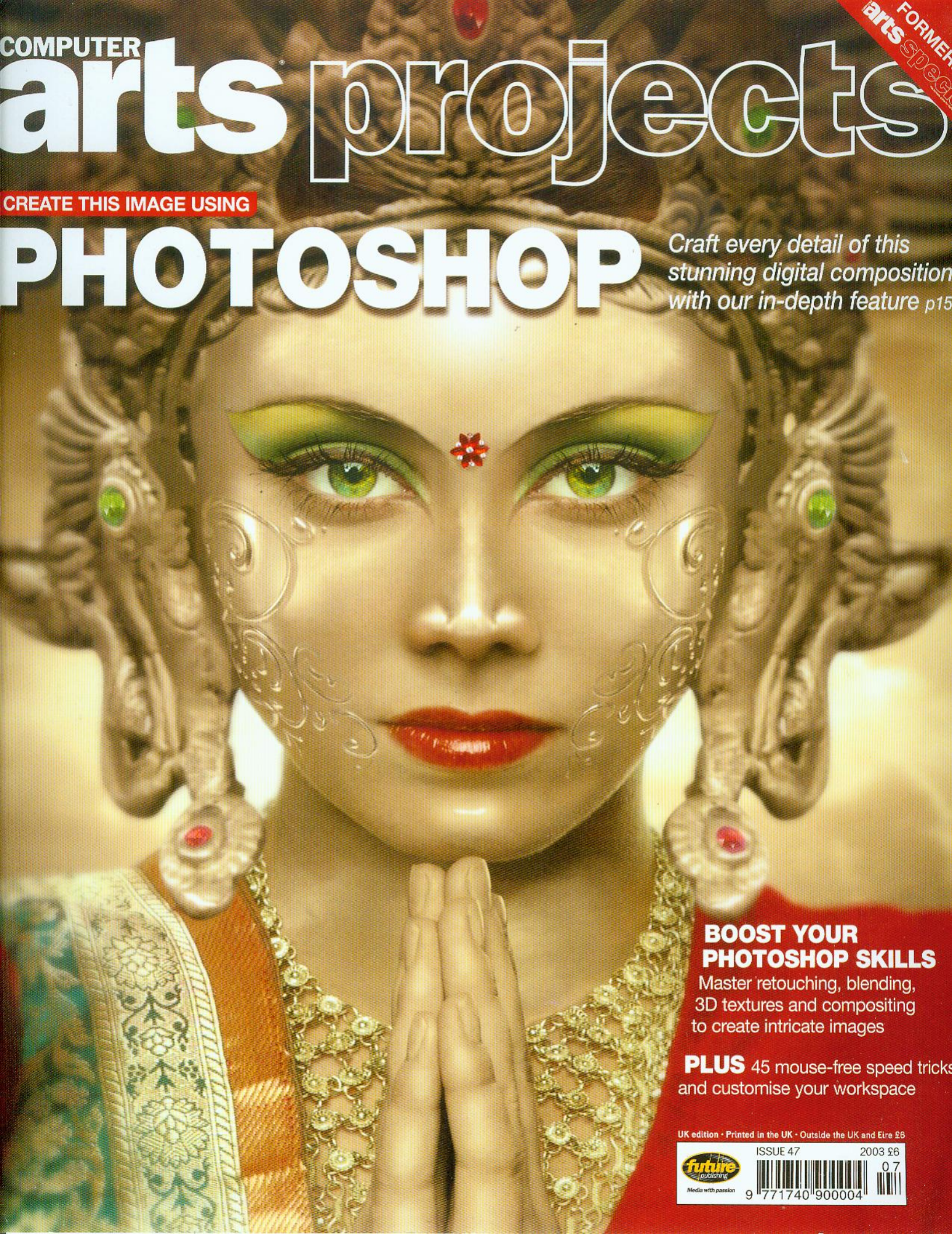
PHOTOSHOP

Craft every detail of this stunning digital composition with our in-depth feature p15



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PLUS 45 mouse-free speed tricks and customise your workspace

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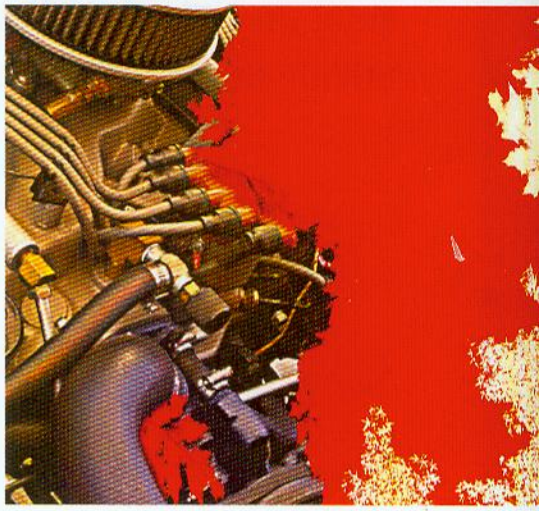

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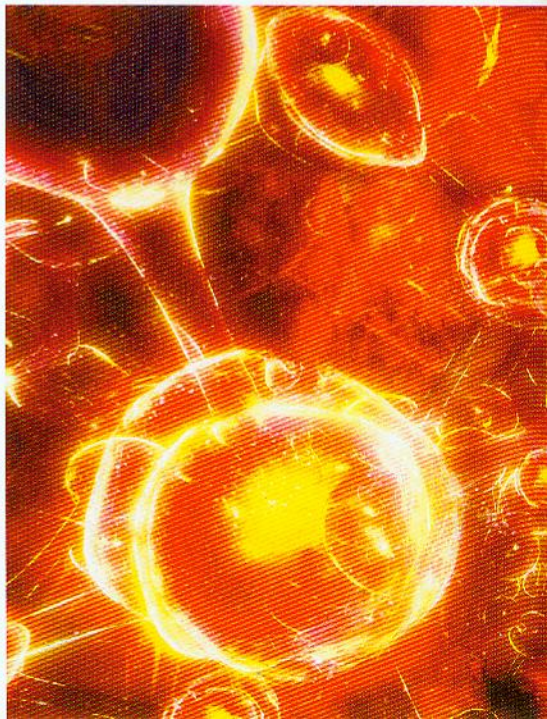
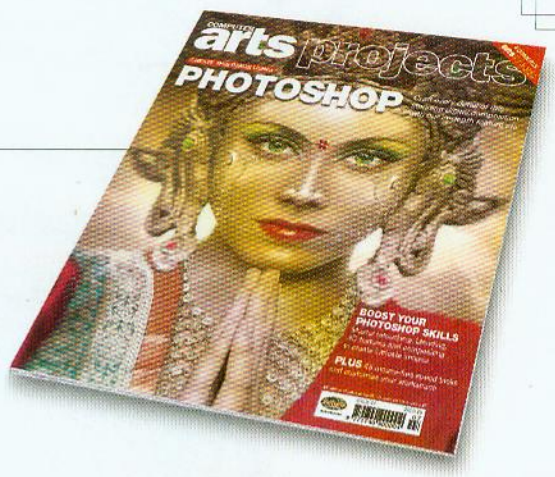
An organic influence is prevalent in Anthony Kyriazis' work





FULL PROJECT

Follow our 46-page guide to creating our covergirl composition and placing it into a scene

CREATE OUR COVER IMAGE IN PHOTOSHOP

In this project, you'll be creating an image for use as a magazine cover and double-page spread. The brief calls for Eastern imagery, bright gold and deep red colour schemes, and some Escher-inspired patterns.

Being a cover image, great importance is placed on enhancing the model's face and eyes. Meanwhile, creating the backgrounds involves much 3D and texture work. It's an intricate job. Are you up to it...

READ THE BRIEF ON P15

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16 Perfecting the face

Rebuild the model's features, change her complexion, incorporate elements from a statue headdress and add some jewels

SECTION TWO

30 Working on the body

Test your layering, masking and compositing skills by adding arms, adjusting the skin tone and creating some Medusa-style locks

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Use *Photoshop* to create 3D textures, *Bryce* to form terrains for a distant landscape, and *Strata 3D* to create objects for the image

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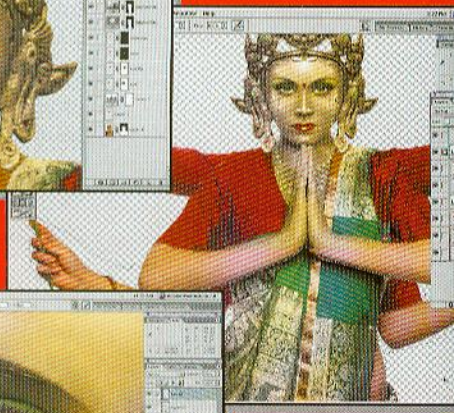
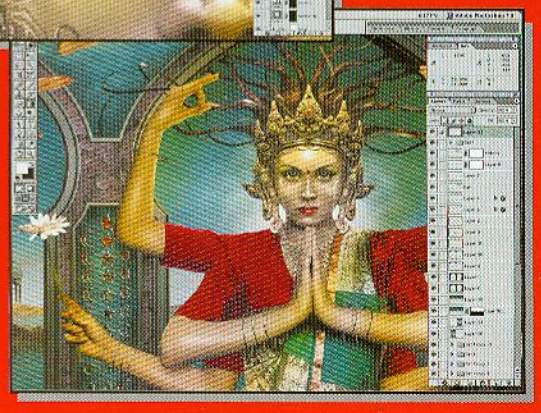
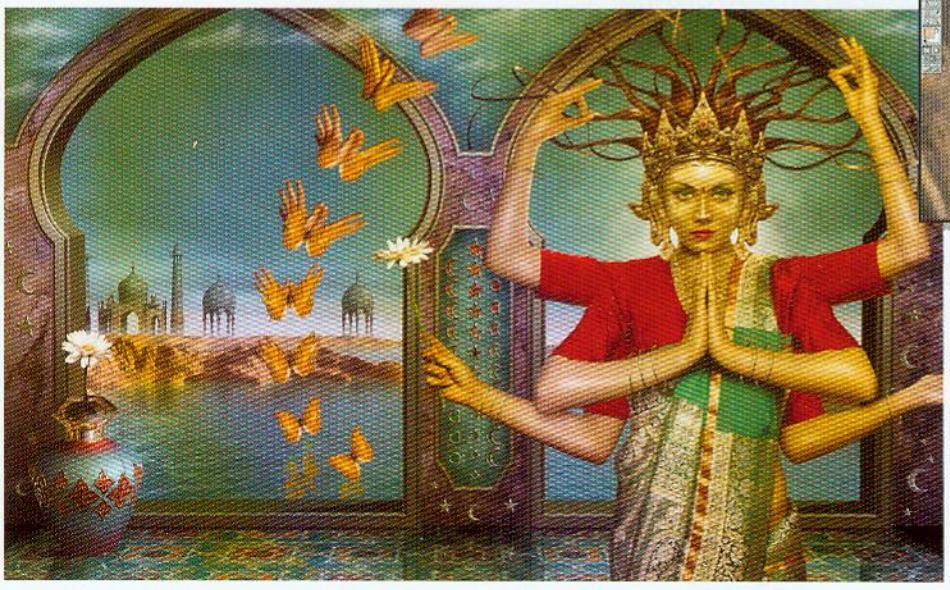
Combine all the elements you've created so far and add some atmospheric finishing touches, like shadows, reflections and mist





Then turn to page 16 and learn how to create every element of this dramatic, mystical composition in *Photoshop*



Award-winning artist Derek Lea guides you through the creation of this intricate image

COMPUTER arts projects INTERACTIVE

SOFTWARE

All the programs and plug-ins you need to create your own digital compositions...

FULL DUAL PLUG-INS

Electroplate and Zephyr

These two effects plug-ins for *Photoshop* come from one of the most reputable third party plug-ins companies there is: Flaming Pear. Electroplate creates an embossed, metallic effect, as though the image was formed out of metal. Zephyr places psychedelic colours and patterns over your image. Try it out. You'll find more details on using both plug-ins on page 92

FULL PC APPLICATION

Eclipse RGB 3.1

This fully featured image-editing application is geared towards manipulating hi-res, RGB images at huge sizes. Its caching capabilities enable the editing of billboard-size RGB images in real time. Find out more details on page 94

PC DEMO

Eclipse fullcolor

Where *Eclipse RGB* enables you to work on images in RGB mode and output for use on screen, *Eclipse fullcolor* is what you need if you intend to use your images in print. With this demo, you can edit and manipulate hi-res images in CMYK mode, and RGB

DUAL DEMO

Photoshop 7

This industry-standard photo-editing application has become one of the greatest digital art tools of all time. But you knew that already. For anyone who hasn't yet acquired *Photoshop* (shame, shame), we've included the demo of the latest version on the CD. Use it to follow the stages of this issue's complete project, which starts on page 15

CD CONTENTS

Image Source photos

Worth a whopping £2490 if you bought them one-by-one, these ten high quality images come from the Urban Surface, Bases & Spaces for Design and Light Abstracts collections. More info on p95

95 Image*After images

Image*After is a new online service that's giving away an array of textures and photos for you to use and edit in your own work. We've brought you a selection to try out on our CD. See page 93 for details

Project files

All the raw materials – photography and otherwise – required to follow our tutorial are on the CD. You'll find them in the folders entitled Section 1 to Section 5. The project starts on page 15

computer arts projects

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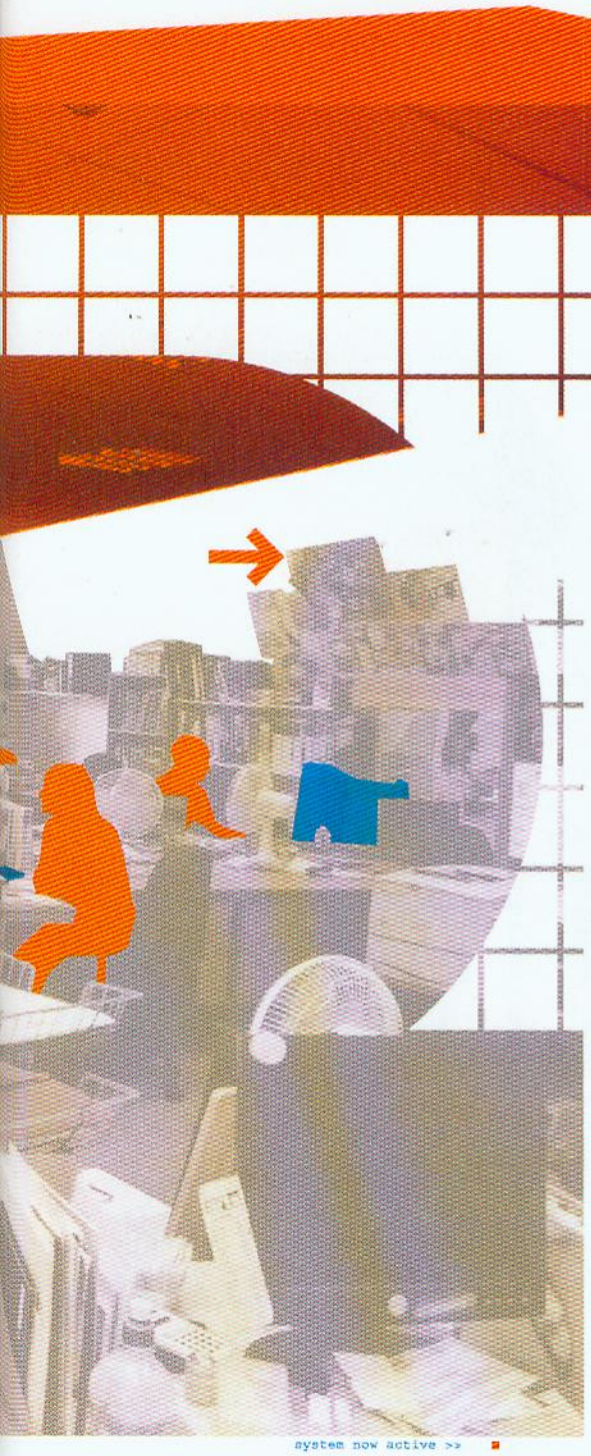


Customising your workspace

Make your *Photoshop* workspace more efficient by customising it for the type of work you do. We show you how to set up the ideal interface for an illustrator, photographer and graphic designer...

For this feature, we've created three different workspaces suited to three specific *Photoshop* users: illustrators, photographers and graphic designers. Being the three main types of professional *Photoshop* user, each can benefit from arranging their most commonly used palettes in a configuration that enables them to work more efficiently.

The *Photoshop* default workspace is a good starting point, but many palettes are grouped together, so you have to select each one while hiding the others in a group. A closer look will reveal that some of these palettes are rarely used and so could be stored in the Palette Well or not be visible at all. When you think about how you use the application and the tasks you need to perform on a regular basis, you realise that a customised workspace makes sense. If, for example, you use the Actions palette a lot, it's a good idea to have the palette open at an appropriate size to allow you to work more quickly and easily.

You can create several workspaces for different uses. A freelance graphic designer, for instance, who not only uses *Photoshop* as a tool to prepare images for print, but also for image-manipulation and producing illustrations, may use all three of the suggested workspaces shown over the page. A simple switch from one workspace to another re-configures the interface to suit your needs. All relevant actions for each workspace will need to be saved into the Presets/Photoshop Actions folder and loaded when switching from one workspace to another.

Expertise provided by Frank Bartucca, a freelance designer with 12 years' experience working in *Photoshop*. You can contact Frank at **[e]** bartucca@btinternet.com or **[t]** 07801721162

Workspace 1: **For Illustrators**

Most commercial illustrators tend to use more than one application to create their work, but when in *Photoshop*, the Layers and Brushes palettes will usually be the most used. The Brushes palette, being the largest palette, is tucked away in the Palette Well to give the maximum screen view, but it can be accessed easily by Ctrl/Right-clicking on the screen.

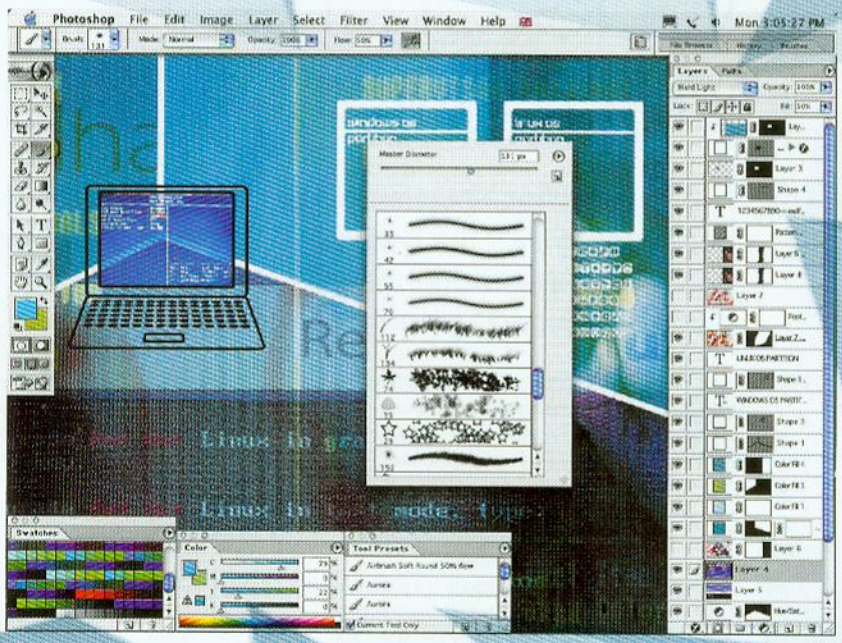
Palettes on screen:
Layers/Paths
Colours
Swatches
Tool Presets

In the Palette Well:
File Browser
History
Brushes

In the Palette Well, you'll see the File Browser, History and Brushes palettes. The File Browser is good to have available as it makes searching for images easier. The History palette allows you to take snapshots at various stages of an illustration to refer back to at a later stage. You can set the History palette options to create a snapshot when saving by clicking on the triangle on the History palette. The Brushes palette is docked here to keep this large palette out of the way.

The selected Screen Mode here is Full Screen Mode with Menu Bar. This gives you the maximum view of your image while keeping the Options bar available for each tool.

The Paths palette is grouped with the Layers palette. Paths are mostly used in this set-up to create masks, shapes and selections. This palette is grouped with the Layers palette because it isn't used much but needs to be easily accessible.



The predominant palette in this set-up is the Layers palette. That's because most illustrators tend to use an incredible amount of layers to create the depth in their work. As the Layers palette becomes congested though, it's a good idea to create Layer Sets for layers, which work as a group or for invisible layers. Here we have the Layers palette extending the whole height of the screen to view as many layers as possible.

Colour is obviously one of the principle concerns when creating an illustration. The Swatches palette has over 20 preset swatches to choose from. However, you can create your own swatch in the Preset Manager by choosing a swatch that has the colours you want and deleting the ones you don't, or by deleting all the colours in a Swatch by selecting them all and clicking on the Delete button. Then click the Done button to start with a clear palette. Now colours can be added by sampling with the Eyedropper from an image and then clicking inside the palette. Once you've created your swatch, you can save it in the Presets/Colour Swatches folder. The new swatch can then be set up as the default swatch in the Preset Manager.

The Colour palette is situated next to the Swatches palette so that colours can first be mixed here, then dragged to the Swatches palette. You can view the gradient of a selected colour by choosing Current Colours from the pop-up menu. The Colour Ramp now shows the gradient allowing you to choose the shade you want.

The Tool Presets palette holds all the available presets for each tool. It can display presets for all tools or just for the tool currently selected. The most useful reason for having this palette displayed is that you can create your own presets for tools as you go. Or, you can create a set of regularly used brushes by selecting New Tool Preset from the pop-up menu each time you create a new brush.

Workspace 2: **For Photographers**

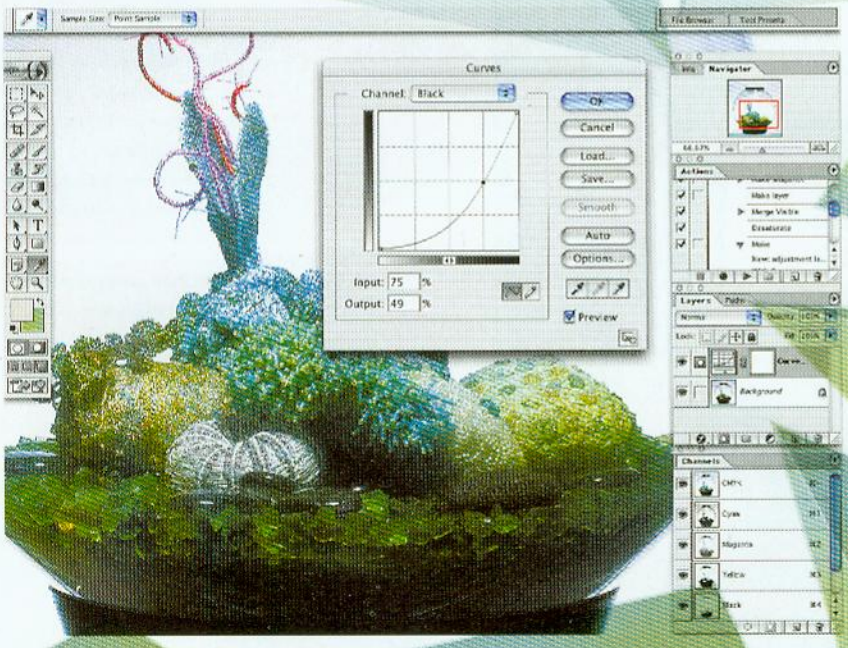
Photoshop will generally be used in a photo studio to manipulate images or to correct colour. This set-up is designed to give the maximum viewing area while keeping all the essential palettes open. Digital photography is becoming more widely used in photo studios now, giving photographers more control over their images by removing the processes of film development and scanning. Now photographers can shoot straight to their computer and manipulate images instantly.

Palettes on screen:
Layers/Paths
Channels
Actions
Info/Navigator

In the Palette Well:
File Browser
Tool Presets

The Info palette is essential to the serious photographer wanting to get accurate results in print. Dragging the Eyedropper across an image will reveal the percentage of ink in each channel. The options for this palette can be customised to your requirements too. By clicking on the triangle to the right of the palette, you can select the preferred mode for both readouts, including Proof Colour and Total Ink. The Navigator palette is grouped with the Info palette as it will mainly be used to scroll round large images or zoom in and out of an area for detailed retouching.

In the Palette Well, you'll find the File Browser and Tool Presets palettes. The File Browser is a very handy tool for the photographer as it can show each image's details, such as whether it has a Colour Profile assigned or any copyright information. It can also be used here to Batch Rename a set of images and to rotate an image by 90 or 180 degrees before opening it. It also displays information from digital cameras such as ISO speed, f/stop and exposure time by selecting the EXIF (Exchangeable Image File) option in the bottom left-hand corner of the palette. The Tool Presets palette can hold a set of Healing Brush Tool presets for quick retouching jobs.



Actions can play a big part in the photo studio for saving time on repetitive tasks. The most common being Batch converting, applying colour adjustments, Unsharp Mask, and Dust and Scratches. These can all be set up as Actions with the same Action having different settings for different types of image.

Again, the Paths palette is grouped with the Layers palette as the two are used in conjunction. Paths will mainly be used to make masks on selected areas of an image to be manipulated.

The preferred Screen Mode here is the Full Screen Mode with the palettes hidden so that the image fills the entire screen for retouching with the Healing Brush Tool or for editing in Quick Mask Mode.

Getting accurate colour reproduction in print is an important consideration to a photographer, so the Channels palette is given space, making flicking through the channels easier. There are keyboard shortcuts to view each channel, but this only allows you to view one channel at a time. It also makes selecting channels easier by just Command/Control-clicking on the channel thumbnail. The Channels palette is shown in CMYK mode here because the image is destined for print, while keeping all the relevant filters is still available.

The Layers palette is open but condensed to show only a few layers. Unlike the illustrator's workspace, the photographer's tasks will not rely heavily on layers – adding Adjustment Layers and Layer masks will be the main usages here, which can easily be done from the bottom of the palette.

Workspace 3: For Graphic designers

The graphic designer is the most general *Photoshop* user, so a more generic workspace is required with more palettes opened and grouped together to save space. The biggest difference here is the inclusion of the Character/Paragraphs palettes for stylised typography, and having Rulers visible for accurate positioning of text and graphics.

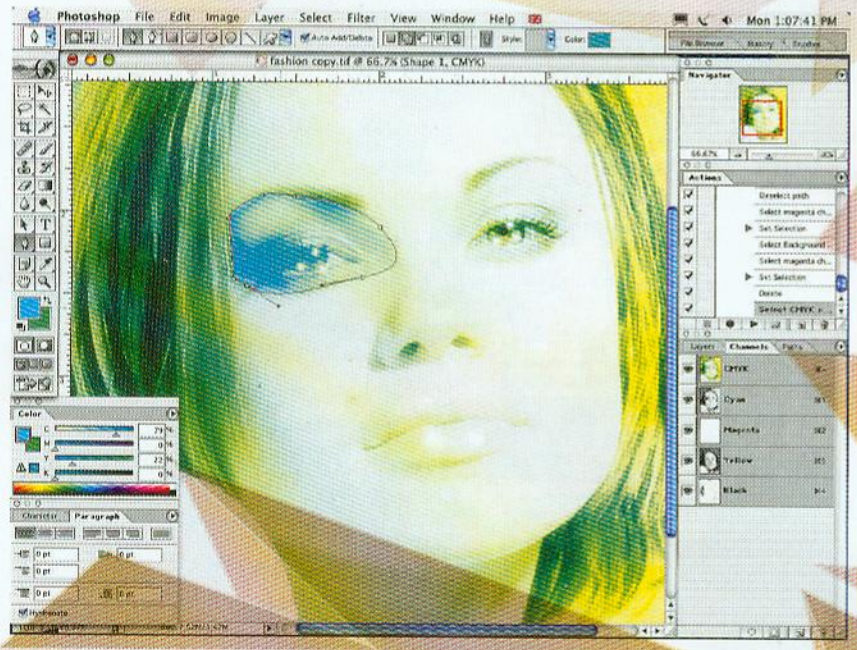
Palettes on screen:
Layers/Channels/Paths
Actions
Navigator
Colour
Character/Paragraph.

In the Palette Well:
File Browser
History
Brushes

The Rulers are visible to drag guidelines into the image for precise alignment and layout.

In the Palette Well are the File Browser, History and Brushes palettes. As in the other two workspaces, the File Browser offers more options when opening files than the Open command, making it the standard choice in this respect. The History palette isn't so important because the graphic designer will tend to spend less time experimenting and may only want to go back a few steps to an earlier state. The Brushes palette is again tucked away because it's extended to its fullest size when open to allow as many brushes as possible to be viewed at once.

The Navigator palette provides the quickest way to move around an image, which is important when up against a tight deadline.



There are several actions that'll be used on a regular basis, so the Actions palette is given a little space to accommodate this. Most commonly used actions will be converting images from RGB to CMYK, changing file format from JPEG to TIFF, or applying a preset Curve to an image to adjust the colour. Actions can be set up to automatically style text by recording a new Action while applying attributes to selected text and saving it. You can also set up actions to open new documents at specific sizes and resolutions for certain jobs. Templates for regular artwork can be set up with trim marks and guidelines in place using View>New Guide... to accurately create grids.

The Layers, Channels and Paths palettes are the primary group of layers. The Layers palette will be the most used in this group so it has precedence over the others. Most common tasks here will be overlaying text, adding Layer Masks, Adjustment Layers and Layer Styles.

Paths will mostly be used to create Clipping Paths for cutouts or to make precise selections to be converted to Layer Masks.

Because the designer is most likely to incorporate type into their designs, the Character/Paragraph palette is open and situated next to the Colours palette. The reason for this is that you can configure these palettes so that the default type style is set how you want it. Simply enter the type attributes in the Character/Paragraph palettes before saving the workspace, so when new text is typed on to the canvas it'll already be in the style set up earlier. To check the spelling of suspect words, first click inside the text then open the Character palette and click on the language pop-up menu to select a language. Then go to Edit>Check Spelling to correct the mis-spelt word or add it to the dictionary if the word is spelt correctly.

The Colour palette is handy for quickly creating specific colours rather than clicking on the Foreground/Background Colour boxes in the toolbar. This is shown in CMYK mode to ensure that colours are not created that lie outside the printable gamut range. Working in RGB mode allows all the Adjustment Layers and Filters to be available, but make sure you have Proof Colours selected under the View menu to see how the image will appear in print.

The Channels palette is second in the Layers group. As most images will be destined for print, they'll be converted from RGB to CMYK. In some cases, it'll be necessary to check the channels individually to make sure that there's enough colour information in the channel for print.

The project brief

Eastern mysticism, bright gold, eye-contact and the work of MC Escher were just a handful of the things we had in mind when we came up with the concept for our cover image...

Naturally, we briefed Derek Lea to create a cover image for the newly renamed *Computer Arts Projects*. First, we needed a picture for the front cover that clearly demonstrates a use of *Photoshop* expertise far beyond the usual buffing up of cover shots seen on other magazines. And secondly, we needed an image incorporating what you can see on the cover that can be used on a double-page spread inside the magazine.

An Eastern style was agreed upon, with particular references to the Indian subcontinent. We had associations with the Taj Mahal in mind, bright golds and deep reds. The basic composition was discussed, and then a cover model was photographed digitally by The Walcot Studio in Bath. The photographers were briefed to pay close attention to the model's face and capture its beauty – the eyes and eye-contact are a key element of our cover. They ended up taking close-ups of all the main areas of the face for Derek to use. In all, they supplied over 80 photos of the model, her hair, jewellery, headdress and so on.

To add intricacy to the image, we asked Derek to work on some Escher-style patterns, as well as a 3D terrain and some architecture for the backdrops. Early ideas for the image had centred on a series of images flowing from one into another, forming a circle. This idea was discarded, but we kept the Escher influence for our final brief.

The artist responded with some sketches and we honed down the details of the commission until we had something that we thought would work. Then came the task of building and honing the image, as well as taking note of every action, every step of the way...

Derek's original sketch incorporates all the elements in the final composition.

Over 80 photographs were taken of our model at The Walcot Studio, which gave artist Derek Lea plenty of material to work with when crafting this complex digital image.

PROJECT CONTENTS

p16 SECTION ONE Perfecting the face

Change our model's face to make it look more statuesque

p30 SECTION TWO Working on the body

Multiple arms and gravity-defying hair add mysticism to the figure

p38 SECTION THREE Building the background

Create the panelled walls, patterned tiles and make a butterfly morph into hands

p50 SECTION FOUR Terrain and texture maps

Build a 3D terrain and use texture maps and models for a distant Eastern landscape

p62 SECTION FIVE Combining all the elements

Add reflections, clouds and mist as final atmospheric touches

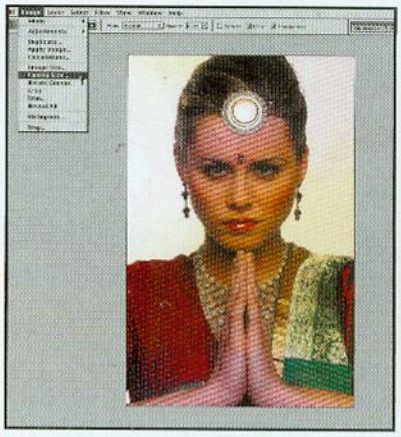
Part 1: Face basics

Before we get into introducing the statue elements , we'll rebuild our model's features and perform some colour and tonal adjustments...

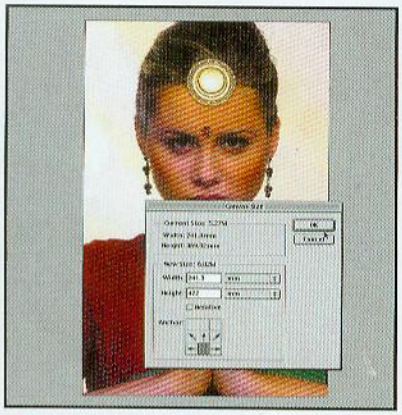
Why two files?

It may seem odd to be working on the face image separately from the body image. The reason for this is simple. We need a higher resolution image for the cover because it's going to appear so big. Later, we'll reduce the head to match up with a body photograph that is the correct resolution for the dual-page illustration requested in the brief. Having the necessary resolution is important to retain all of the sharpness and detail of the image. If we'd worked to the size of the body image, the result on the cover would have been soft and fuzzy due to blowing up an image that's simply too small.

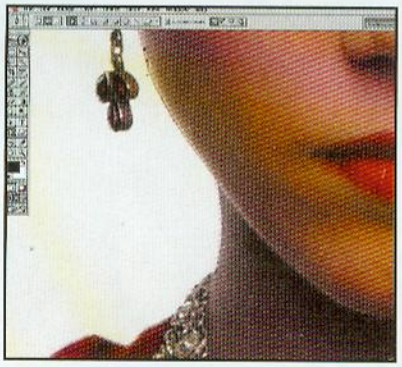
1. Open the head.psd file from the cover CD. In the Layers palette, double-click the background layer icon. You'll be asked to name the layer; it doesn't really matter what you call it because all we want to do is float the layer off the background.



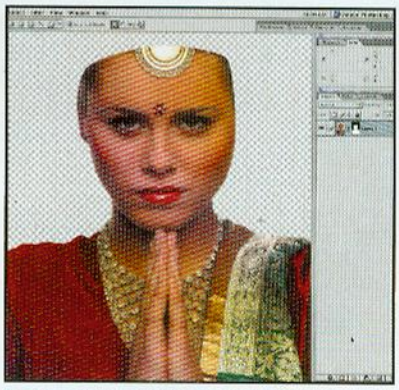
2. Once you've named it, click OK. Now the layer is sitting on top of a transparent backdrop. This comes in handy later when you combine this layered file with another. Choose Image>Canvas Size from the menu.



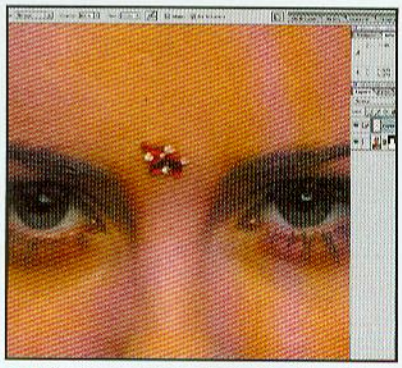
3. In the Canvas Size window, anchor it to the bottom centre. Increase the height of the canvas so that you add some extra space at the top for the crown of the statue – this will vary depending on what size file you're using. We increased ours to about 422mm.



4. Select the Pen tool (p), zoom in to 100 per cent (Command-Option-0 on the Mac or Ctrl-Alt-0 in Windows), and draw a closed path around the woman. Be careful not to include any of the white background. Draw inside her hair and ears, because we aren't going to include them in the image.

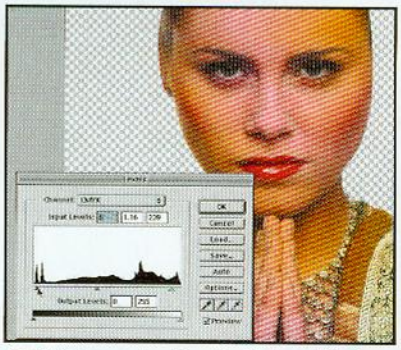


5. Command-click (Mac) or Ctrl-click (Windows) the path icon in the Paths palette to generate a selection from it. Then click on the 'add a layer mask' icon in the Layers palette to mask out the area outside your selection on the current layer.

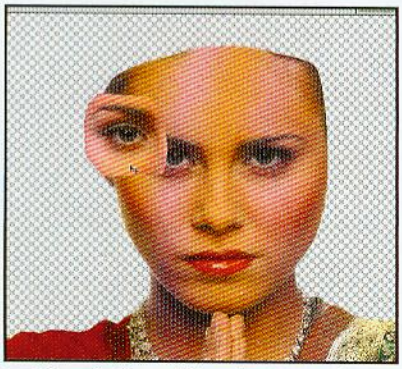


6. Create a new layer and select the Clone Stamp tool (s). Select a large soft brush from the preset picker and set the opacity to 100 per cent. Make sure Use All Layers is enabled and Option-click (Mac) or Alt-click (Windows) just outside the jewel on her forehead. Begin to clone out the jewel.

7. Do the same for the golden jewellery on her forehead, although you'll probably want to use a larger brush. Don't be too fussy about going over the top of her head, because this area doesn't matter. Create a new levels adjustment layer from the pull-down menu at the bottom of the Layers palette.



8. Make some Input Levels adjustments that affect all channels. Drag the shadow slider to the right a little. Drag the highlight slider to the left a little, as well as the midtones slider. What you're aiming for here is to increase the contrast and brighten the woman a little.

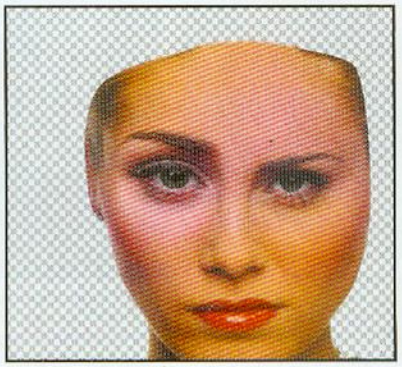


9. Open the file eye.tif from the CD. Use the Lasso tool (l) to draw a rough selection around the eye and brow. Hold down the Command key (Mac) or Ctrl key (Windows) and drag the contents of your selection into the working file as a new layer.

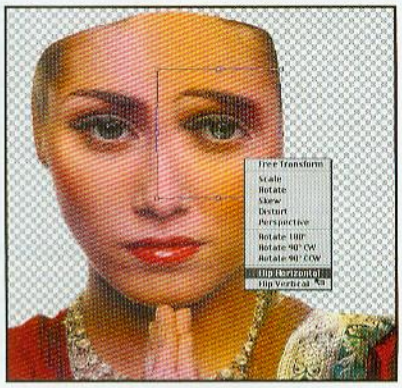
Adjustment layers

Every time a colour adjustment is applied to an image in *Photoshop*, a little bit of the information is stripped away, deteriorating the image quality. The effect is cumulative. The beauty of adjustment layers is that they don't directly affect the image in the way that a direct colour adjustment does. It's possible to work in a non-linear way, going back to edit the adjustment layers after the fact, and not affecting the quality of the image with each adjustment.

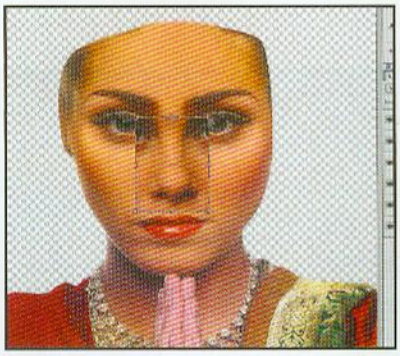
10 Use Free Transform (Command-Option-t on the Mac or Ctrl-Alt-t in Windows) to resize, distort, skew, and reposition the eye. You want to cover the left eye and make this one larger. Skew it a little so that the left side is a little higher than the right, and scale it horizontally a bit more.



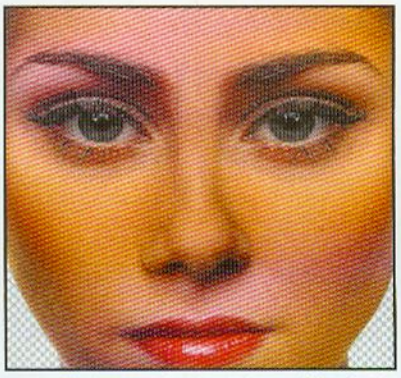
11 Add a mask to the layer and select the Brush tool (b). Select a large soft-edged brush of 100 pixels or more with an opacity setting of 100 per cent. Paint on the mask to cover the hard edges of the eye image and make it look like it blends into the image.



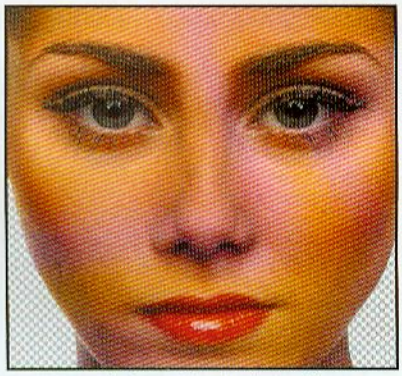
12 Drag the layer icon onto the 'make new layer' button in the Layers palette to duplicate it. Use Free Transform, hold down the Control key (or Right-click in Windows) while clicking in the bounding box and flip it horizontally. Move this layer over her right eye.



13 Open nose.tif from the cover CD. Select all (Command-a on a Mac or Ctrl-a in Windows) and use the Move tool to drag the contents of your selection into the working file. Use Free Transform to reduce the size of the nose and position it over the original, make it a little smaller than the original.

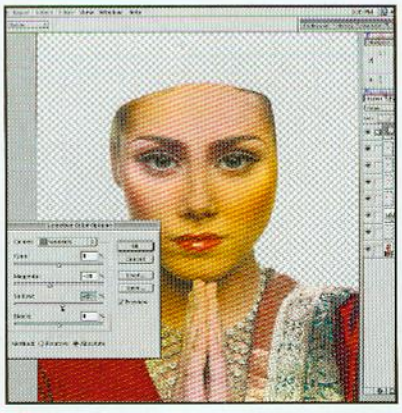


14 Add a layer mask and use a large soft brush with an opacity setting of 100 per cent to paint out the hard edges on the mask – this makes the nose look more like part of the face. Notice that there's too much shadow under the bottom right of the nose.

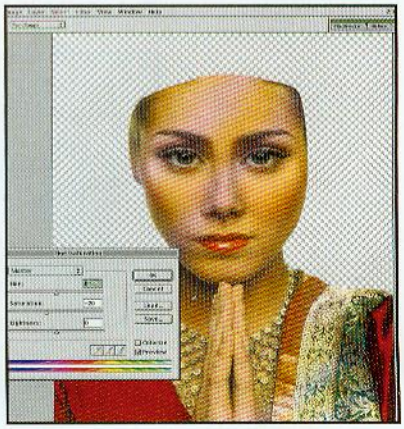


15 To remedy this, make a duplicate of the nose layer. Use Free Transform to flip it horizontally just like you did with the eye earlier. Use the Brush tool on the mask to paint out the left side so that the underlying nose layer shows through.

16 Use the Pen tool to draw another closed path. This time, draw the path around her arms, hands, chest and head. Be very careful not to include any areas of fabric within your path. Zoom in to 100 per cent or greater so that you can see what you're doing.



17 Command-click (Mac) or Ctrl-click (Windows) the path icon to generate a selection from it. With the selection active, create a new selective colour adjustment layer. Select neutrals from the colours and leave it set to Absolute. Remove about 20 per cent magenta and add 8 per cent yellow.

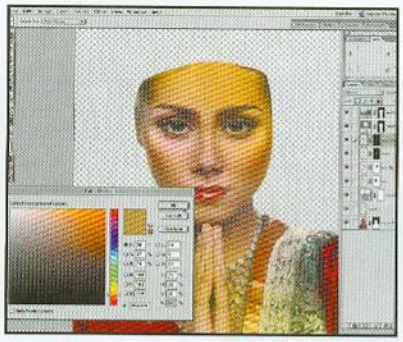


18 Command-click or Ctrl-click the mask of your adjustment layer to reload the selection. With this active, create a new Hue/Saturation adjustment layer from the drop-down at the bottom of the Layers palette. Reduce the Saturation by about 20. ›

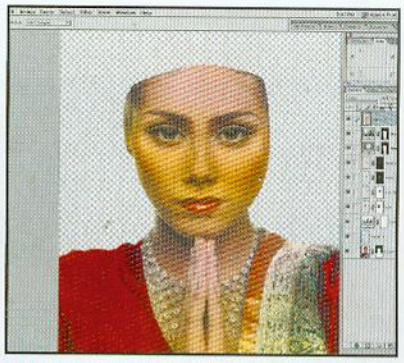
Face basics continued...

Liquify

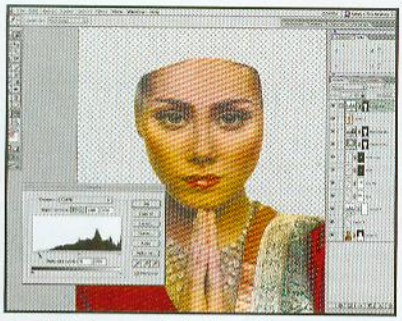
Not enough can be said about the power of this relatively new tool – bloat, pucker, warp, and so on, to your heart's content. The liquify effect isn't applied to the image until you click OK, so you can adjust the image inside the Liquify filter any number of times without affecting the image quality each time (like you would if you were to simply use the Smudge tool instead). You can also view underlying layers inside the filter. Sometimes when working with files like this one, with a lot of layers, it's easier to not use this function since you'll spend a long time waiting for the preview to refresh.



19 Click on the foreground colour icon to access the Colour Picker. Create a new foreground colour of C:24, M:32, Y:51, K:5. Command-click or Ctrl-click the mask icon from your Hue/Saturation adjustment layer to reload it as a selection.



20 Create a new layer and fill the active selection with the new foreground colour (Option-delete or Alt-delete). Change the layer blending mode to Colour and reduce the opacity to 24 per cent.



21 With the current selection still active, create a new levels adjustment layer. Again, using only the input levels and all of the channels selected, drag the highlight slider to the left to brighten the highlights a little. Drag the shadow slider to the right to darken them.

Part 2: Incorporating the headdress

Free Transform functions, a little painting and masking techniques are employed to begin joining the statue headdress to our model...

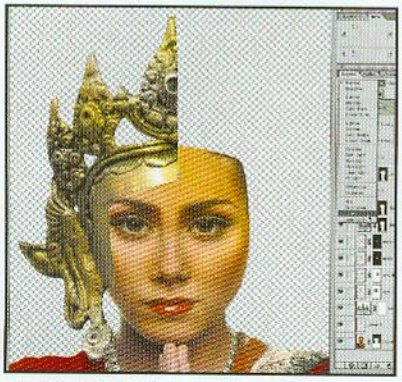
Caps lock

With many tools, like the Brush or the Pen tool, pressing caps lock converts the tool cursor to a crosshair. The cross hair is helpful when it's important to be precise. When we draw paths throughout this tutorial, we always have the caps lock enabled so we can see more clearly. When drawing paths around areas like the hands, you don't want the pen tool icon to obstruct your view of the underlying pixels.

1 Open the file: main statue.tif. Use the Pen tool and draw a closed path around the left part of the headdress. Be sure to include some of the forehead and cheek. Also draw three closed paths around the holes in the headdress. Select these three using the Direct Selection tool.

2 With them selected, click on the 'subtract from path area' button in the tool options bar. Command-click or Ctrl-click the path icon to generate a selection from it, and notice that the three smaller paths are subtracted. Use the Move tool to drag your selection contents into your working file.

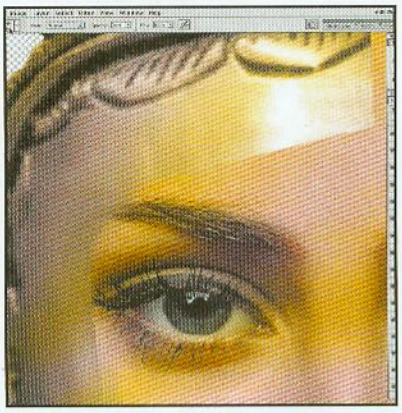
3 Use the Free Transform command to resize the headdress and reposition it so that it fits properly on the head. When it's in place, duplicate the layer and change the blending mode of the duplicate to Overlay.



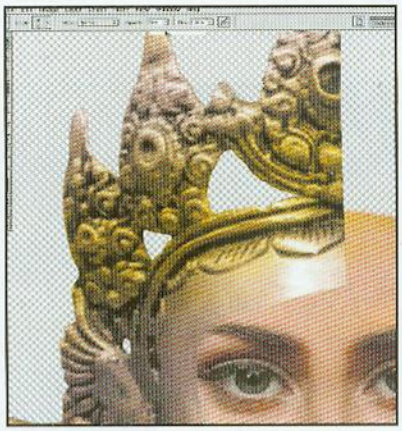
4 Duplicate this layer, and change its blending mode to Screen. Reduce its opacity to about 8 per cent for a subtle effect. Command-click or Ctrl-click the layer icon to generate a selection from it. Create a new layer with a Colour blending mode.

5 Use the Eyedropper tool to sample a colour from the model's skin. Fill your selection with your new foreground colour (Option-delete on the Mac or Alt-delete in Windows). Then reduce the opacity of the new layer to 71 per cent.

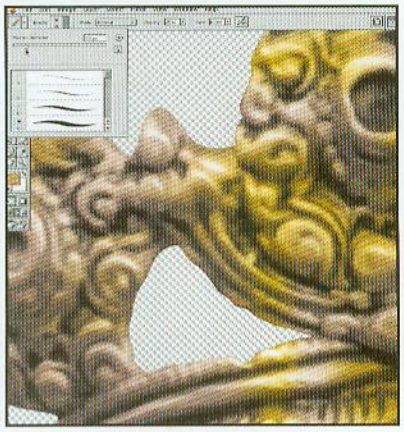
6 With your current selection active, create a new Hue/Saturation adjustment layer. Increase the Hue by 6 and reduce the Saturation by 24. This slight hue adjustment and desaturation makes the headdress look more like it belongs with the face.



7 Using the Brush tool, choose a large soft brush and an opacity setting of around 35 per cent. Sample colours from the forehead using the Eyedropper tool. Paint over some of the grainy forehead of the statue, slowly going over areas with different colours.



8 You'll have to touch up the whole headdress in this way. Create a new layer and choose a smaller brush so that you can sample colours from, and paint over, smaller areas of detail. Take your time here.

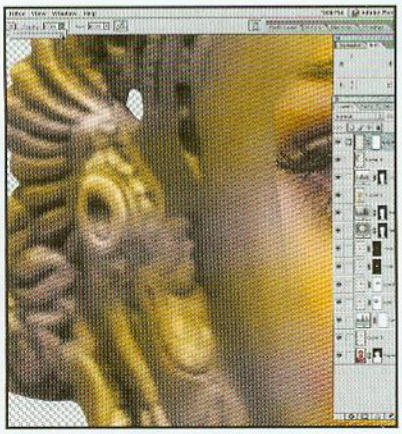


9 Use smaller brush sizes where needed and don't be afraid to change the opacity settings as you see fit. This part of the project will be time-consuming, but don't rush it – it's important that you do a good job here.

10 Select the Smudge tool (r), which is in the Blur tool pop-up in the tool bar. Set it to 50 per cent, and make sure that Use All Layers is enabled in the tool options bar. Begin to use the Smudge tool to soften and smear areas on the headdress.

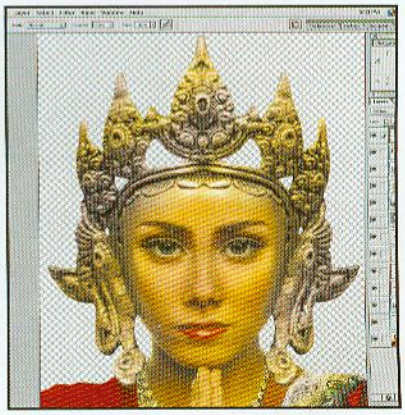
11 Link this layer and all of the headdress layers in the Layers palette and merge them into one single layer (Command-e or Ctrl-e). Use the Lasso tool to draw a rough selection from the jewel housing just left of the centre.

12 Float this selection as a new layer (Command-j or Ctrl-j). Use the Move tool to move it down lower, near the top of the ear. Use Free Transform to alter the perspective. Hold down Command-Option-Shift (Mac) or Ctrl-Alt-Shift (Windows) and drag the lower right corner downward.



13 Add a layer mask and select the Brush tool (b). Select a large soft brush with an opacity setting of 100 per cent and a foreground colour of black. Paint on the mask so that you mask out the hard edges of the jewel housing.

14 Link this layer with the headdress layer underneath and merge them (Command-e or Ctrl-e). Add a layer mask. Use the Brush tool you have currently selected to mask out the hard edges of the headdress which overlap the face. Use a larger brush size if required.



15 Duplicate the layer. Use Free Transform to flip it horizontally. Use the Move tool to move it to the right. Hold down the Shift key so that it doesn't shift up or down. Use the Brush tool on the layer mask to soften the area in the middle where the layers overlap.

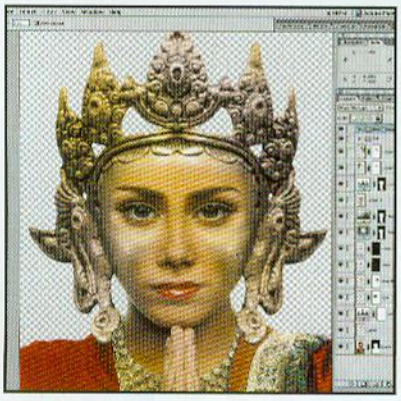
Part 3: Perfecting the complexion

In this section, lots of *Photoshop* tricks and techniques are employed to bring a sense of the surreal to our model's human features and complexion...

1 Open the file: statue face.tif. Use the Polygon Lasso tool to draw a rough selection around the cheek on the left. Use the Move tool to drag the selected area into your working file. Use Free Transform to properly size and position the piece over her cheek.

2 Add a layer mask and use a large soft brush with a black fill colour to soften the edges. Duplicate the layer and change the mode of the duplicate to Overlay. Create a new layer with a blending mode of Colour.

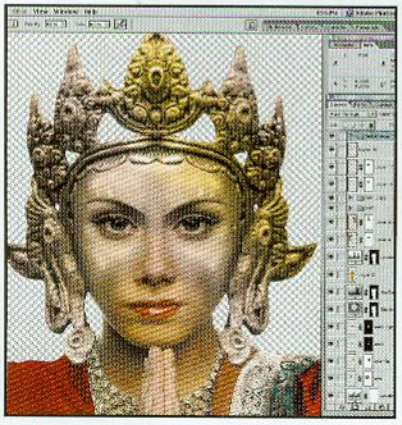
3 Sample a colour from the headdress and use a large soft brush to paint over the cheek so that it matches. Create a new layer set by clicking on the 'create a new set' button at the bottom of the Layers palette, and add all of the cheek layers to the new set.



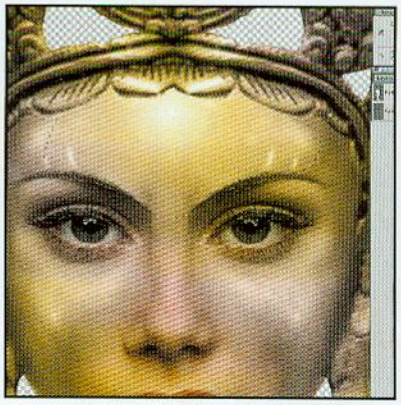
4 Choose 'duplicate layer set' from the Layers palette sub-menu. Use Free Transform on the duplicate to flip it horizontally and use the Move tool to move it to the right while holding down the Shift key.

5 Back in the statue face.tif file, make a rough selection around part of the forehead. Drag it into the working file and use Free Transform to resize and reposition it. Add a layer mask. Use large and small soft-edged brushes on the mask to soften the edges.

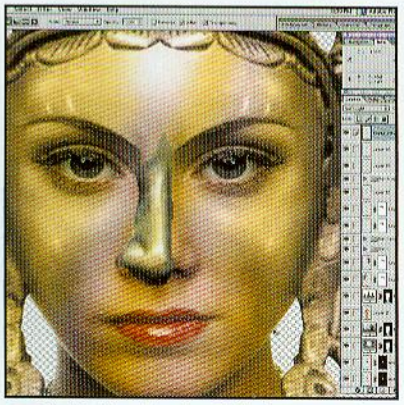
6 Duplicate this layer and change the blending mode to Soft Light. Create a new layer with a Colour blending mode. Select the Brush tool and sample colours from both the cheek and the headdress. Paint over the forehead using the new sampled colours.



7 Create a new layer set and add these three layers to it. Duplicate the layer set. Use the Move tool while holding down the Shift key to move it to the right so that it's sitting over the top of the other eye.



8 Use the Pen tool to draw a closed path that encompasses the forehead between the hairline and the eyebrows. Generate a selection from it. Create a new layer and use a radial gradient with a fill of white to transparent to draw a highlight on the forehead on this new layer.



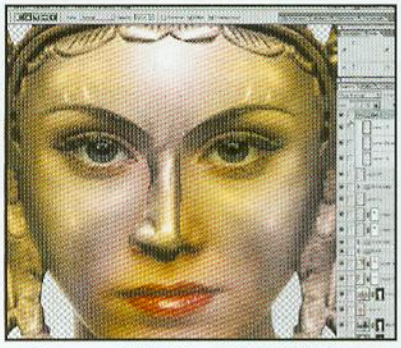
9 Back in the statue face.tif file draw a rough selection around a section of the nose using the Lasso tool. Drag and drop this section into your working file. Resize and reposition it using Free Transform. Make a duplicate of the layer and change the blending mode to Soft Light.

Gradual cloning

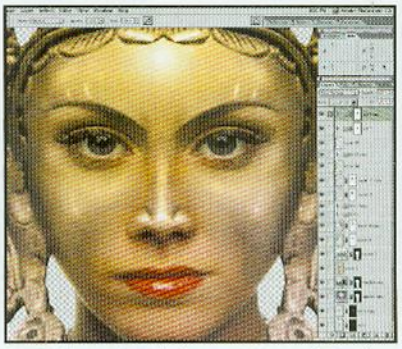
When using the Clone Stamp tool to cover things, like the gold jewellery on her forehead, it's best to approach it gradually. First, start with a 100 per cent opacity setting and cover the object. Don't worry too much about the quality at this point. When it's covered, you can perfect the image using the Clone Stamp tool. Reduce the opacity to 50 per cent and soften some of the areas where you can see the shape of your brush by defining origin points outside the area and cloning them over the top of the area. Then reduce the opacity to 20 per cent or lower and go over everything again, sometimes at this stage it's beneficial to increase the brush size for an even softer effect.

Multiple shots

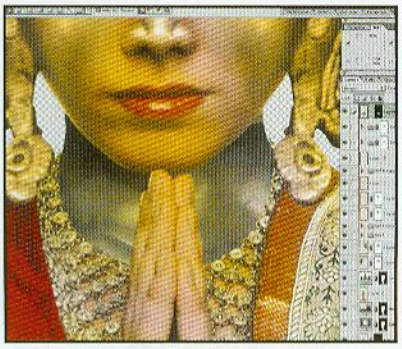
One of the main advantages of working digitally is that there's no extra cost in shooting a number of extra shots: no film, no processing, no scanning. This gives us the opportunity to shoot a lot more than we normally would so that we can pick eyes from one shot, a nose from another, and so on. It also allows us to shoot close-ups of the head and face features so that they're large enough and sharp enough to use on the cover, as well as shoot the woman in two different saris and with her arms in all sorts of positions. The main caveat with shooting digitally is that you'll often shoot so many extra shots that the selection process is much longer.



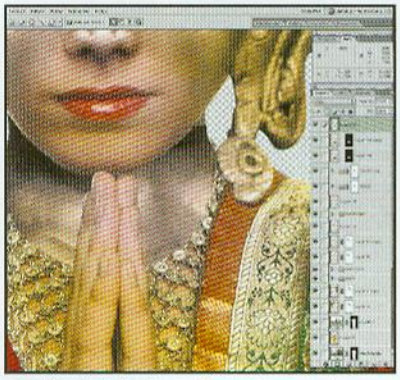
10 Command-click (Mac) or Ctrl-click (Windows) the layer to generate a selection from it. Create a new layer with a Colour blending mode. Sample a gold colour from the headdress and fill the active selection with it (Option-delete or Alt-delete). Create a new layer set and add the three nose layers to it.



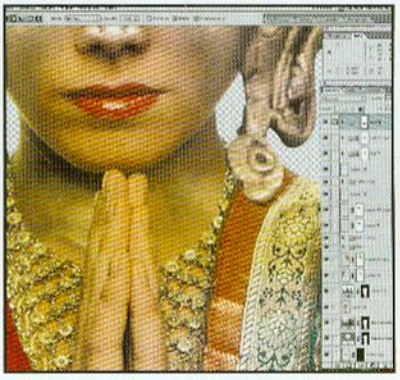
11 Add a mask to the layer set. Use a soft brush on the mask with a black foreground colour to paint out the hard edges. Duplicate the layer set and flip it horizontally using Free Transform. Adjust the placement if necessary to cover the right side, and paint over the hard edge on the mask.



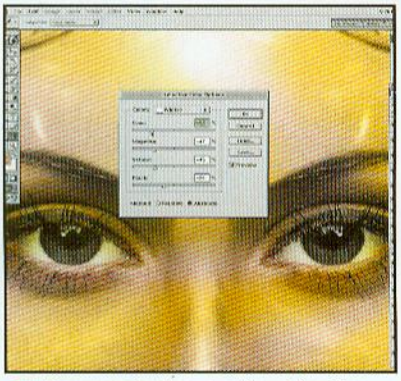
12 In the file statue face.tif, draw a rough selection around the neck and copy (Command-c or Ctrl-c). In your working file draw a closed path around her neck only, making sure you don't include her hands. Generate a selection from the path and Paste Into (Command/Ctrl-Shift-v).



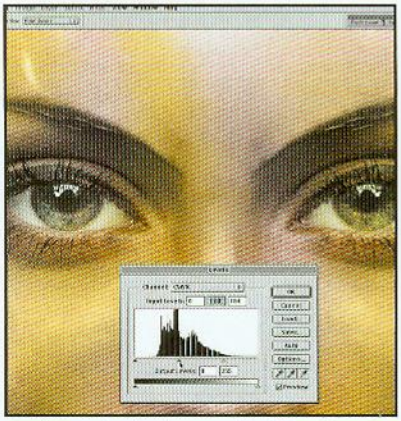
13 Duplicate the layer, change the mode to Overlay, and reduce the opacity to 65 per cent. Generate a selection from your path again and create a new layer with a blending mode of colour. Fill the selection with the same foreground Colour you used for the nose. Deselect.



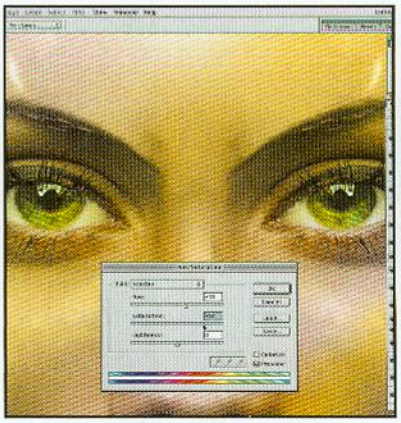
14 Reduce the opacity of the layer to 61 per cent. Create a new set and add the layers to it. Reduce the opacity of the set to 88 per cent. Using a combination of radial gradients and large soft brushes, edit the mask using a foreground colour of black to soften all the edges.



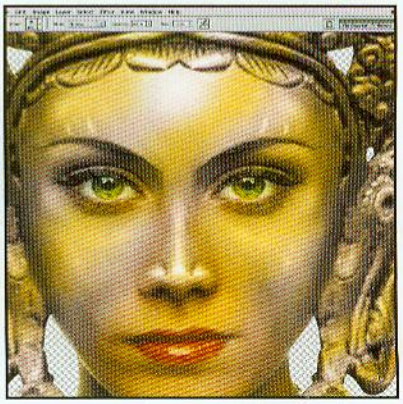
15 Draw closed paths around the whites of her eyes. Generate a selection from the paths. With the selection active, create a new selective colour adjustment layer. In the neutrals section strip some colour away, but strip the majority from the whites until the eyes begin to look brighter.



16 Draw closed paths around her irises. Generate a selection from the paths and create a new levels adjustment layer. In the Input Levels of all channels drag the highlights slider to the left and the midtones slider to the left to brighten the eyes.



17 Command-click or Ctrl-click the levels adjustment layer mask to generate a selection. Create a Hue/Saturation adjustment layer. Increase the Hue by 18 and increase the Saturation by 57. Now the eyes look quite luminous.

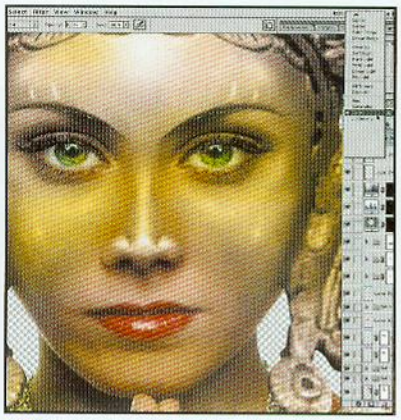


18 Create a new layer with a Lighten blending mode. Use a soft brush with a low opacity setting. Sample lighter colours from the face and carefully paint over some of the darker areas of her face like above her brow, between her eyes and between her cheeks and mouth. ›

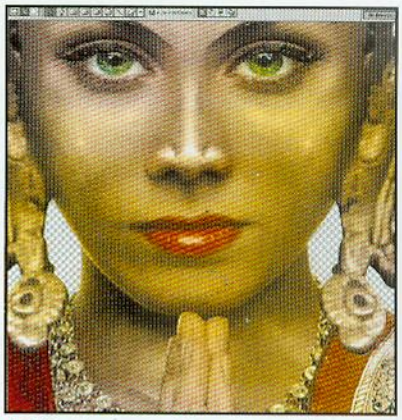
Perfecting the complexion continued...

Use all layers

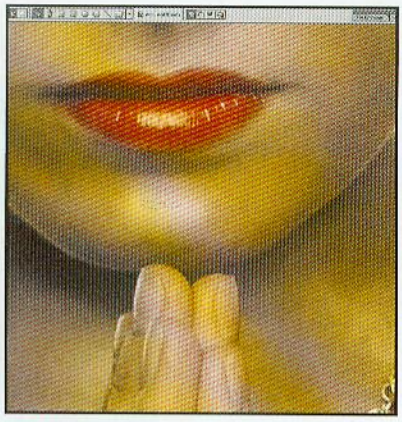
Throughout this tutorial we do almost all the things like blurring, smudging and cloning on new layers. All of these tools include a Use All Layers function, which basically takes the information on all of the underlying layers into account when performing a function. That way, you get all the benefits of working directly on the underlying imagery, but also the flexibility to change your mind and mask or edit a layer and still have the unaffected images underneath.



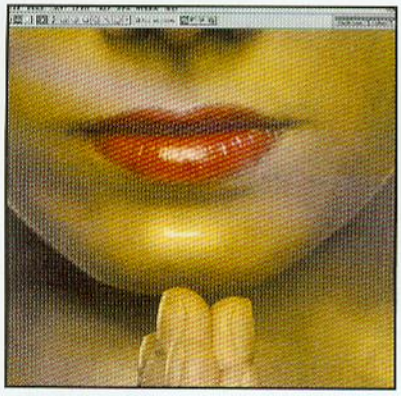
19 Create a layer with a Normal blending mode. Use the same brush and sampled colours to paint over remaining rough areas and blemishes on the face. Keep going until she looks smooth. Create a new layer with a Colour blending mode and sample a colour from her cheek or forehead.



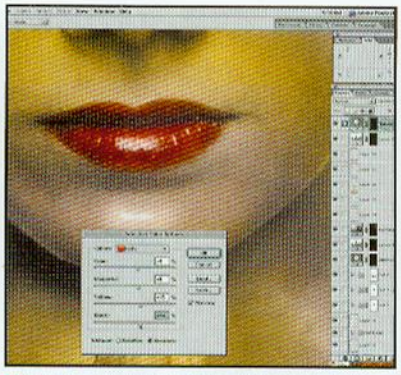
20 Use the same brush to paint on this layer to even out the areas of colour that don't look right, paying special attention to the area around her mouth. Use the Pen tool to draw a closed path for a highlight area on her chin. Generate a selection from the path.



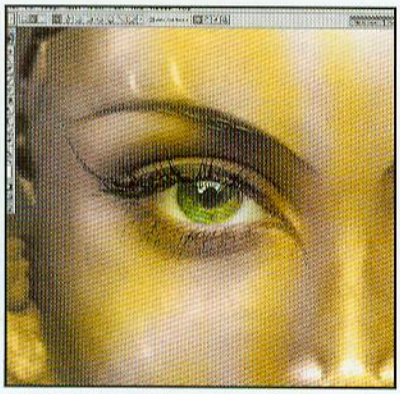
21 Fill the selection with a lighter colour sampled from her face. Deselect. Choose Filter>Blur>Gaussian Blur from the menu. Blur the layer contents by about 25 pixels to make it very soft. Draw another closed path for a specular highlight and generate a selection from it.



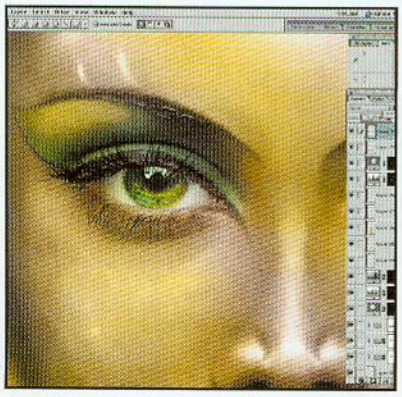
22 Create a new layer and fill the active selection with a very light colour sampled from her nose. Deselect, and Gaussian Blur the layer by about 3 pixels. Draw a closed path around her lips and generate a selection from it. Create a new levels adjustment layer.



23 In the Input Levels, using all channels, darken the shadows and brighten the highlights. Command-click (Mac) or Ctrl-click (Windows) this adjustment layer mask to generate a selection from it. Create a new selective colour adjustment layer. In the reds section, increase the colour in every channel, especially yellow and black.

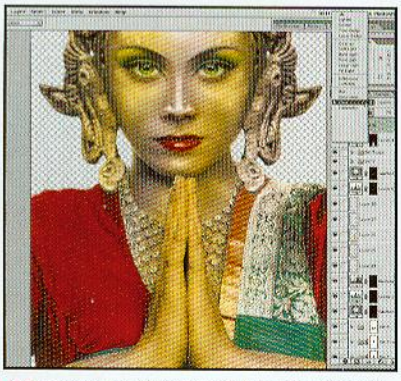


24 Draw closed paths on either side of her eye to add to her eyeliner. Generate a selection from the paths. Create a new layer. Sample the dark brown from the make-up on her eyelid and fill the selection with it. Change the layer mode to Multiply and the opacity to 65 per cent.



25 Draw a closed path around the area above her eye and generate a selection from it. Create a new layer with a Colour blending mode. Use a large soft brush to paint in some greens sampled from her iris. Reduce the opacity of the layer to 77 per cent and deselect.

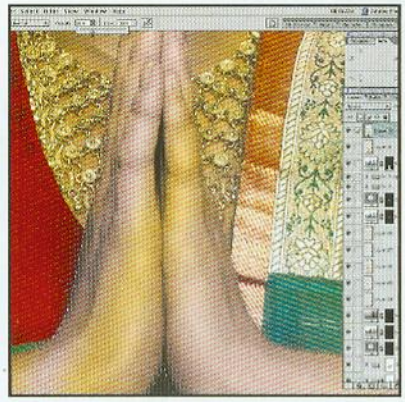
26 Create a new layer set and add these two eye make-up layers to it. Duplicate the set and flip it horizontally using Free Transform. Move it to the right so that it fits nicely over her other eye. Use the Pen tool to draw a closed path around her hands and arms.



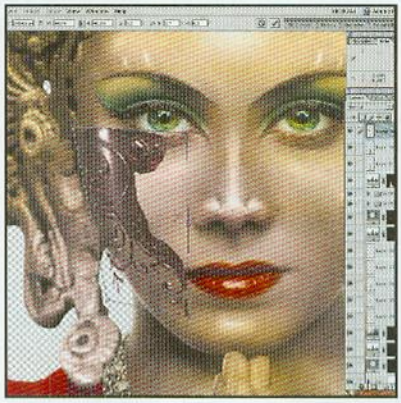
27 Generate a selection from the path and create a new levels adjustment layer. Using all channels, brighten the highlights and darken the shadows in the Input Levels. Command-click (Mac) or Ctrl-click (Windows) the adjustment layer mask to generate a selection from it and create a new layer with a colour blending mode.

Free Transform

When you use Free Transform, hold down the Control key and click anywhere inside the bounding box. A pop-up menu appears. It's in this pop-up menu that you'll have access to rotation, horizontal and vertical flipping. You can also choose between scale, rotate, skew, distort and perspective. These affect the behaviour of the bounding box when you adjust it. It's possible to do a distort adjustment, then switch to a skew adjustment, and so on, before applying your Free Transform. By applying the various transformations all at once there's less image degradation than if you were doing them one at a time.

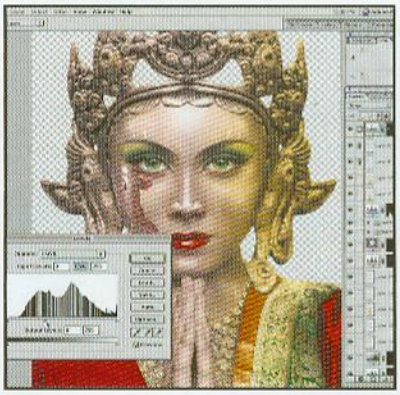


28 Fill the selection with a colour sampled from her neck and reduce the layer opacity to 80 per cent. Create a new layer, and inside the selection, use various brushes with colours sampled from her skin to smooth out her hands and arms. Just like you did previously with the headdress.

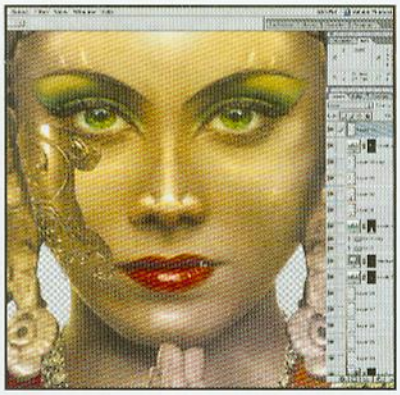


29 Open the file: glass.tif. Draw closed paths around some of the ornate details in the left of the image. Generate a selection from the path and drag it into your working file. Position it on the lower left of her face and use Free Transform to size, distort and position it.

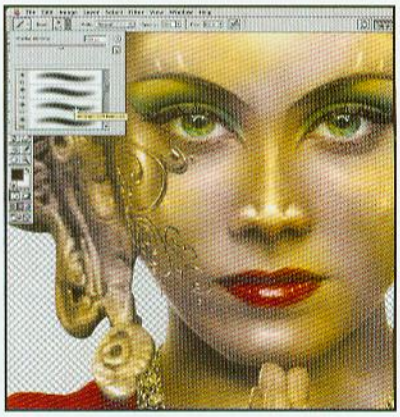
30 Choose Filter>Liquify from the menu. Use a large soft brush with a low pressure setting. Use the Bloat and Pucker tools to mimic the contour of her face. Use the Warp tool to push the piece at the lower left a little to the right so that it sits over her face.



31 Duplicate the layer set and change the mode to Overlay. Command-click (Mac) or Ctrl-click (Windows) the layer icon to generate a selection from it. With this selection active, create a new levels adjustment layer. Using all channels, drag the midtones slider to the left to brighten things.

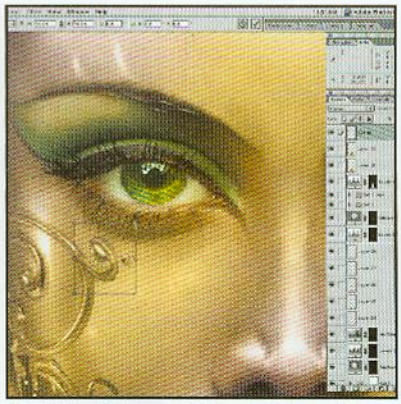


32 Command-click or Ctrl-click the levels layer mask icon to generate a selection from it. Create a new layer with a Colour blending mode. Sample a gold colour from her face and fill the selection with the foreground colour. Add the glass detail layers to a new layer set, then add a mask to the set.

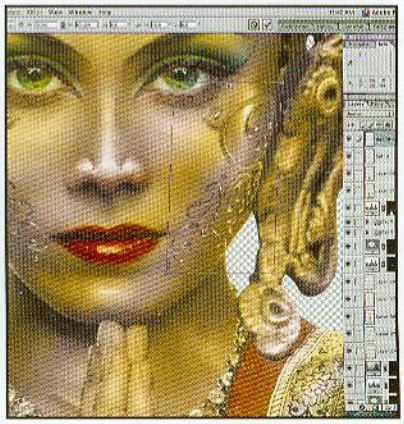


33 Use the Path tool to draw a closed shape around the outside of the details to the right. Make a selection from the path, then use different brushes inside the selection to soften the edges. Deselect, and paint over any areas that still need it.

34 Command-click or Ctrl-click the top layer icon to generate a selection from it. Create a new layer on top of the others in the set with a Lighten blending mode. Sample lighter colours from the face and select a soft brush with a low opacity setting. Begin to paint over the detail.



35 Merge the layer set, then apply the mask by dragging the icon into the trash and clicking Apply when prompted. Use the Lasso tool to draw a rough selection around the piece of detail just under her eye. Use Free Transform to shrink and reposition it to the left. Deselect.



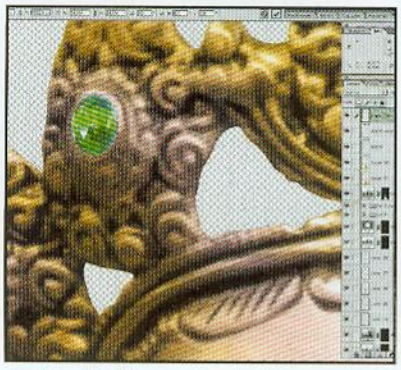
36 Fix any resulting rough edges using the Rubber Stamp, Smudge and Blur tools. Duplicate the layer. Flip it horizontally using Free Transform, position it over her other eye, and use Free Transform again to shear it slightly so that it fits nicely.

Part 4: Adding jewels

Reintroduce the jewel on our model's forehead, and add some 3D rendered emeralds and rubies to increase the cash value of her headdress...

Layer sets

When you're adding layers to a new set, pay attention to their positions in the layer hierarchy. When you add a layer to a set, the first one is the top layer. The second one you drop on the set becomes the second layer down. The third, the third layer down, and so on. So be careful to avoid confusion when you build files with a lot of layers, especially when stacking duplicate layers with different modes. Sometimes, if you don't drag them in in the proper order, it can be difficult to remember how they were positioned originally in the hierarchy.



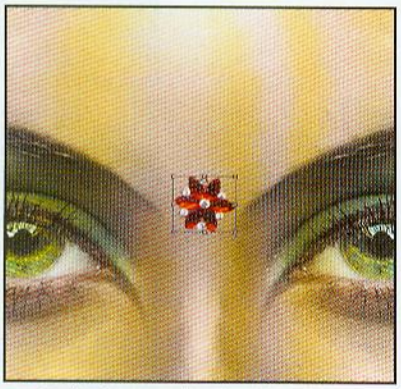
1 Open the file: green jewels.psd. Draw a closed path around one of the jewels and generate a selection from it. Drag the contents of the selection into the working file. Use Free Transform to scale the jewel so that it's a more appropriate size and shape.

2 Back in the green jewels file, draw a path around a different jewel and drag it into your working file. Resize and reshape it using Free Transform. Position it on the other side of the headdress. Duplicate the layer.

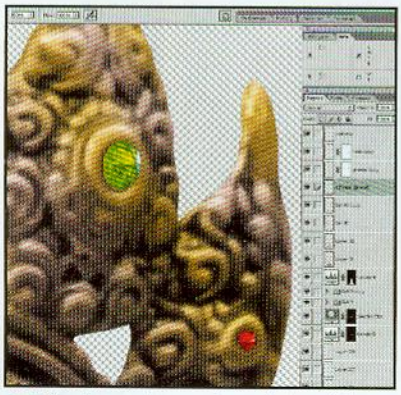
3 Use the Move tool to position it in the spot over the right ear. Adjust the shape using Free Transform. Duplicate your first jewel layer and move it down over the left ear. Again, use Free Transform to adjust the shape. Link all of the jewel layers and merge them into one.

4 Add a layer mask and select a hard-edged brush with a radius of about 50 pixels. Set the opacity to 100 per cent, and the foreground colour to black. Carefully paint on the mask over areas where the jewels overlap the housings.

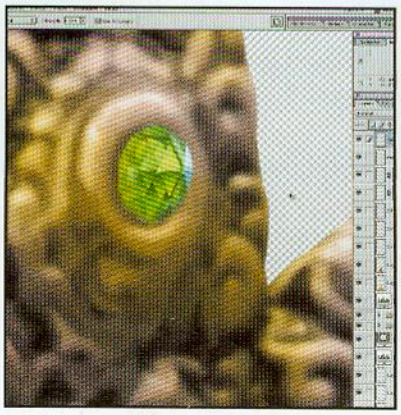
5 Open the file: red jewels.psd. Follow the same procedure you used to put the green jewels in place. Add them into the empty jewel housings on her headdress. Select Image>Adjust>Hue/Saturation from the menu. Adjust the sliders to make the jewels brighter red/less pink.



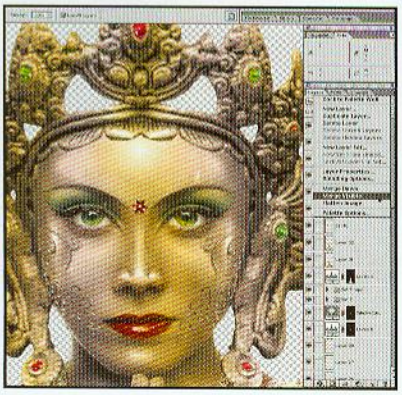
6 Back in the original head.psd file, draw a closed path around the model's forehead jewel. Generate a selection from it and drag it into the working file. Use Free Transform to resize it and position it on her face. Use Hue/Saturation to brighten this jewel like the previous ones.



7 Create a new layer and move it down in the Layers palette so that it's underneath all the jewel layers. Change the mode to Darken and select a soft brush with an opacity setting of 50 per cent. Paint some shadows under the jewels using colours sampled from the image.



8 Create a new layer and move it to the top in the Layers palette. Use the Blur tool with Use All Layers enabled, a small soft brush tip, and strength set to 100. Paint over areas with hard edges, like the jewels and around her hands, to soften them.



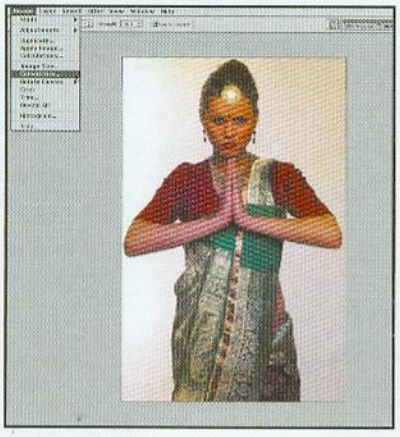
9 Use the Clone Stamp tool on this layer with Use All Layers selected. Use varying brush sizes and opacities to remove some unwanted specular highlights from her forehead. When you're finished, choose Merge Visible from the Layers palette sub-menu. This combines all visible layers into one. CD•P

Part 1: Adding arms

In this part, we introduce a series of arm images on individual layers, making use of the Path tool, layer opacity and Free Transform...

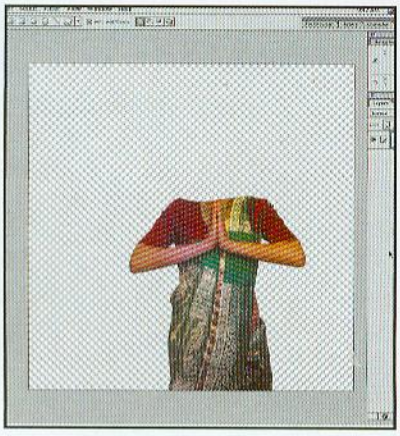
Choosing arms

The future for any *Photoshop* artist really is digital photography. A key example of this is that all the extra arms we added were from separate individual shots. These weren't the only shots we had either; we waded through almost 20 to find what we were looking for. No extra film, processing or scanning costs were involved. All you need is a progressive photographer to work with, like Paul at The Walcot Studio, or a decent digital SLR camera of your own. And, of course, plenty of disk space.

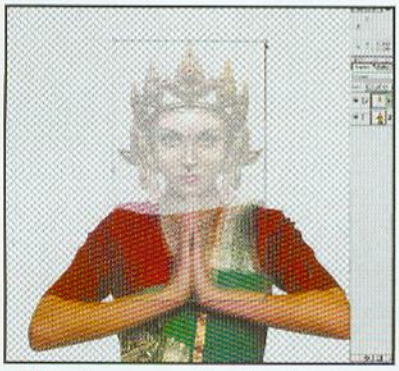


1 Open the file body.tif from the cover CD. Double-click the background layer and name it anything you like – you just want it to become a layer and not the background. Choose Image>Canvas Size from the menu.

2 Add enough extra area around the model so that you'll have plenty of room for her arms later. We increased our canvas to around 450mm by 450mm. The reason for this is that we need the resolution for print and will possibly need to crop in closer on certain sections.



3 Use Free Transform to increase her size and position her slightly right of centre. Draw a closed path around her, omitting her head and neck. Generate a selection from the path, and click on the 'add layer mask' button in the Layers palette.

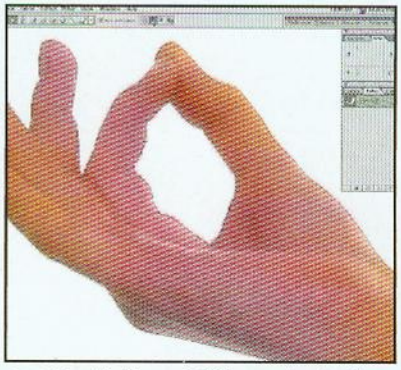


4 Drag in your merged layer from the previous section, where we created the face. Reduce the opacity of the layer to 50 per cent. Now that you can see through the layer, use Free Transform to reduce the size of the head so that it closely matches the underlying layer.

5 Hit Enter to apply the transformation, and return the opacity of the layer to 100 per cent. It doesn't have to match up perfectly, but should be close enough so that blending the layers together later won't be a nightmare.

6 Open the file arm1.tif from the cover CD. Draw a closed path around her arm and a bit of her clothing. Generate a selection from the path and drag the contents into your working file. Use Free Transform to reduce the size of the arm so that it's in proportion.

7 Move the arm into position to the lower right of the image so that it's vertically below the existing arms. In the Layers palette, move the arm layer down in the hierarchy so that the other layers are above it. Keep this layer selected in the Layers palette.



8 Open the file: arm2.tif. Draw a closed path around this arm as well. For the area between her thumb and forefinger draw another closed path. With this path selected, choose the 'subtract from path area' icon in the tool options bar.

9 Generate a selection from the paths by Command-clicking or Ctrl-clicking the icon in the Paths palette. Drag the contents of the selection into the working file. Use Free Transform to resize the arm and move it into place at the lower left. Keep this layer selected in the Layers palette.

Reducing opacity

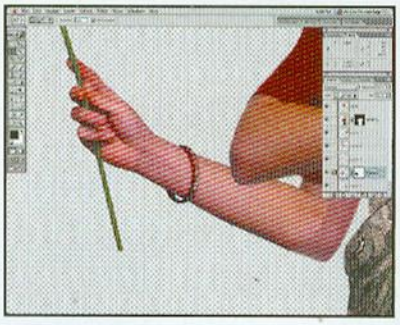
This can be key when trying to piece together different images. Reducing the opacity of a layer allows you to see underlying layers and adjust angle and size accordingly, which is crucial when doing things like trying to match a head from one shot to a body from another. But make sure you reduce the opacity *before* you enable Free Transform. Once the Free Transform bounding box shows up, you won't be able to adjust the layer opacity until you exit the operation.

10 Open the file arm3.tif from the cover CD. Draw a closed path around the arm and draw a second path, with subtract attributes, in the area between her thumb and forefinger. Generate a selection from your paths and drag the contents of the selection into your working file.

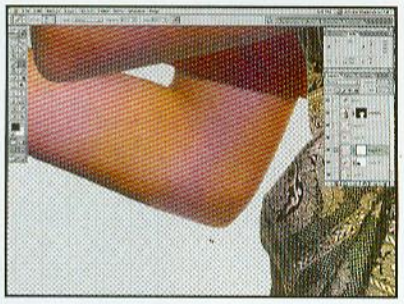
11 Use Free Transform to resize and position the arm to the upper right. Keep this layer selected in the Layers palette. Open the file: arm4.tif. Draw a closed path around the arm, and draw a second path with subtract attributes inside the area between her thumb and forefinger.

12 Generate a selection from the paths and drag the contents into your working file. Use Free Transform to resize it and position it to the upper left. In the Layers palette, select the layer containing the arm on the lower left. Open the file flower.tif from the cover CD.

13 Draw a closed path around the arm and flower. Generate a selection from the path and drag the contents of the selection into your working file. Reduce the opacity of the layer to 60 per cent and use Free Transform to resize and position it over the lower left arm.



14 Return the layer opacity to 100 per cent. On the layer underneath, draw a rough selection using the Polygon Lasso tool. Draw it around the area of the arm you want to hide, then choose Layer>Add Layer Mask>Hide Selection.



15 On the flower layer, add a layer mask by clicking the button in the Layers palette. Choose a large soft brush with an opacity setting of 50 per cent and a foreground colour of black. On the mask, paint over the hard edge until the arms look as if they blend together.

Part 2: Polishing the image

It's time to adjust the colour, smooth the skin and clean up joining images so that it all looks like it belongs together...

1 Link the flower layer and the underlying arm layer and merge them. Command-click (Mac) or Ctrl-click (Windows) the new layers icon to generate a selection from it. Hold down the Shift key and Command-click or Ctrl-click the upper left arm layer icon to add it to the selection.

2 With the selection active, create a new levels adjustment layer. Use all channels and drag the Input Levels of the shadows and midtones to the right to darken them. This will even out the lighting from the shots, which was a little brighter on the left.

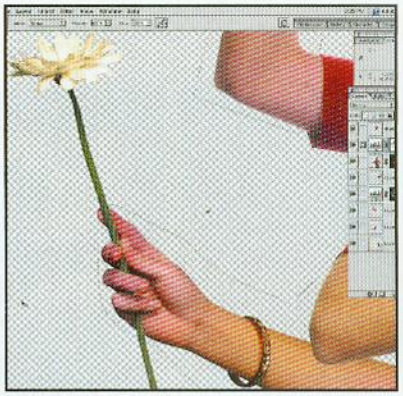
3 In the Layers palette, create a new levels adjustment layer under the head layer but above all of the other layers. Using all channels, adjust the input levels to darken the shadows and brighten the highlights a little. Brighten the midtones quite a bit. >

Polishing the image continued...

Healing tool?

You'll have noticed by now that throughout this tutorial we've often used the Clone Stamp tool to blend things together or to clean up areas. The Healing tool, which is relatively new, is a fantastic tool and can certainly perform many of the same functions. However, the main reason we aren't using it throughout this tutorial is that there's no Use All Layers function to enable while using the Healing tool. It's important to our flexibility while building the working file to perform operations on new layers leaving the original images untouched. That way, if we ever want to go back and change things, the option is there. It'll be no surprise, given Adobe's upgrade track record, if we see a Use All Layers function in the Healing tool in the near future. Keep your fingers crossed.

4 Add a mask to your adjustment layer. Use the Pen tool to draw closed paths around her arms (just the skin, not any fabric or the flower). Generate a selection from the path, specify a foreground colour of a medium grey, and fill the selection with the foreground colour.

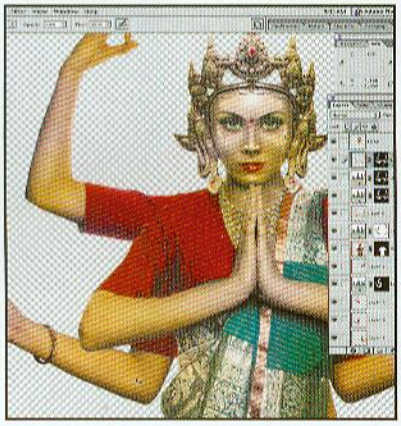


5 This fades the effect of the adjustment layer on her arms. Invert the selection and select a large soft brush with opacity set to 100 per cent and a foreground colour of black. Paint over the flower on the adjustment layer mask to make it unaffected by the levels adjustment.

6 Command-click or Ctrl-click the layer mask icon on the body layer to generate a selection from it. Shift-Command-click or Shift-Ctrl-click the four arm-layer icons to add them to the selection. Create a new layer with a blending mode of Colour just under the head layer.

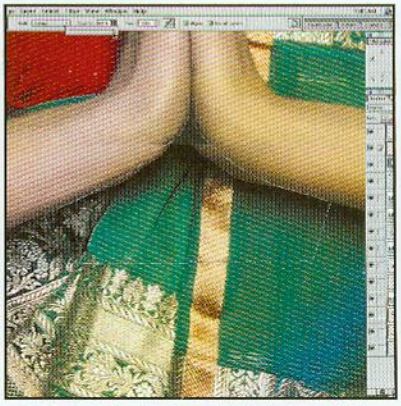
7 Sample a colour from the face and fill the active selection with the sampled colour. Reduce the opacity to 78 per cent. Draw a path around the exposed skin on her stomach, generate a selection from it and fill it with the same foreground colour. Deselect.

8 Command-click (Mac) or Ctrl-click (Windows) the layer icon to generate a selection from it. Create a new levels adjustment layer. Using all channels in the Input Levels, brighten the highlights and darken the shadows even more. Duplicate the layer to intensify the effect.

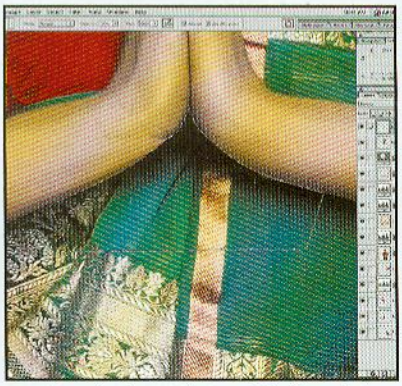


9 Reload the selection. Create a new layer and click the 'add layer mask' button. On the layer, not the mask, select a soft-edged brush with a low opacity setting. Begin to sample colours from the model's skin and paint over her arms and hands to even out tones and smooth her complexion.

10 After painting over her skin to smooth it, we noticed that overall her skin is looking a little too yellow. Create a new selective colour adjustment layer. In the Yellows section with a setting of Absolute, reduce the yellow by about 7 per cent to make it less saturated.



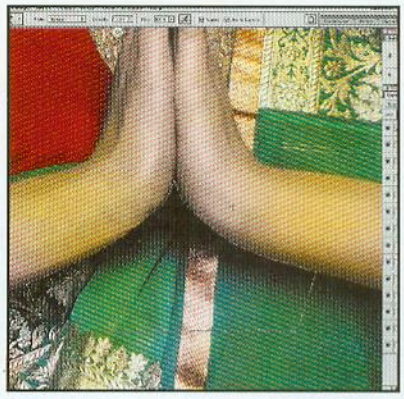
11 Draw a closed path under the bottom of the hands to define a new bottom edge for where the hands meet. Create a selection from the path. Create a new layer. Select the Clone Stamp tool with Use All Layers and an opacity of 100 per cent.



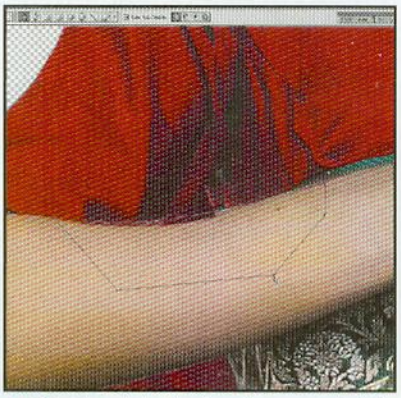
12 Move the layer to the top of the hierarchy in the Layers palette, and use a small soft brush to clone over the arms inside this selection. Cover them with shadows and fabric to define a new bottom edge. When you're finished, invert the selection (Command-Shift-I or Ctrl-Shift-I).

Selected layers

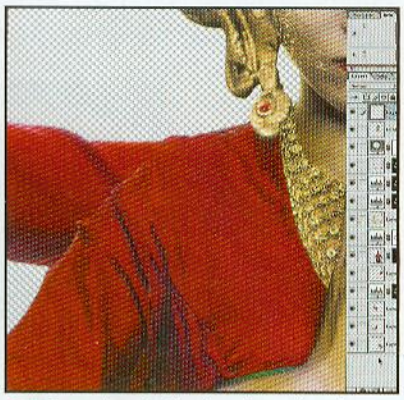
When you drag an image or a selected portion of an image from one *Photoshop* file to another, it appears in the destination file as a new layer. However, don't assume that it'll automatically be at the top of the layer hierarchy in the Layers palette. The position of the new layer in the layer hierarchy is determined by which layer is selected. By default, a new layer brought into the file will be positioned directly above the selected layer. That's why, in the section of the tutorial where we're bringing in the separate arms, you're told which layers to keep selected in the hierarchy before dragging in the new ones from other files.



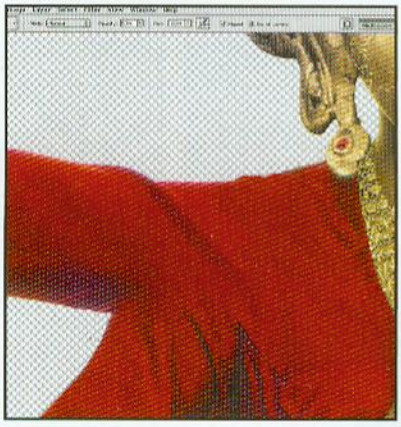
13 Increase your brush size and clone over the hard edge where the hands from the head image meet the arms from the body image. Use a lower opacity setting and go over the areas again to smooth them. Select the Brush tool and set the opacity to around 25 per cent.



14 Sample a dark colour from the arms and paint where shadows on the skin are required. When you're finished, deselect. Use the Pen tool to draw a closed path over the top of each arm where the two images meet, to define the shape of the top of the arms.

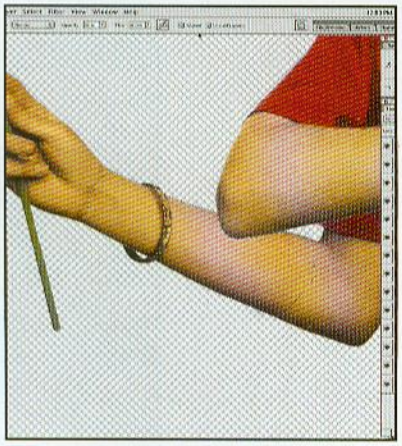


15 Generate a selection from the paths and use the Clone Stamp tool with an opacity of 100 per cent to join the images and create a new top edge for the arms, just like you did with the bottom edge. Deselect, and then zoom in on the area of the left shoulder.

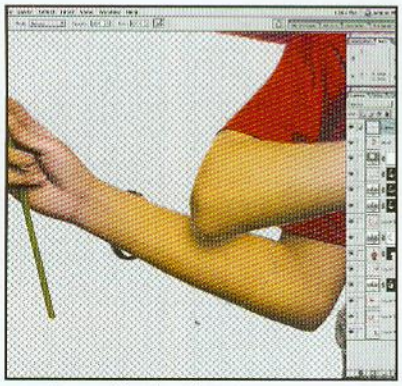


16 Use the Clone Stamp tool here to sample areas of the fabric and clone over the hard edges to blend the separate images together. Do the same thing on the right shoulder. When you're happy with the shoulders, do the same thing in the underam areas.

17 Select the Blur tool (r), with Use All Layers enabled, and a strength setting of 100 per cent. Use the Blur tool on this layer with a small soft brush to go over any remaining hard edges in the image. You'll definitely need to go over the areas around her arms and hands.



18 Use the Pen tool to carefully draw a closed path around the lower left arm. Be sure to omit the overlapping elbow and the bracelet that goes beyond her arm from the path. Generate a selection from the path and select the Clone Stamp tool.



19 Use a soft brush with a 50 per cent opacity setting, and Use All Layers enabled, to clone out the bracelet within the selection. Select the Brush tool with a large soft tip and an opacity setting of 25 per cent. Sample a dark shadow colour from the arm and paint a shadow under her elbow.

20 Invert the selection and select the layer with the arm on it. Use the Eraser tool to erase the areas of the bracelet that remain. Also, erase this area on the colour layer in the Layers palette. Deselect. Create a new layer at the top of the hierarchy in the Layers palette.

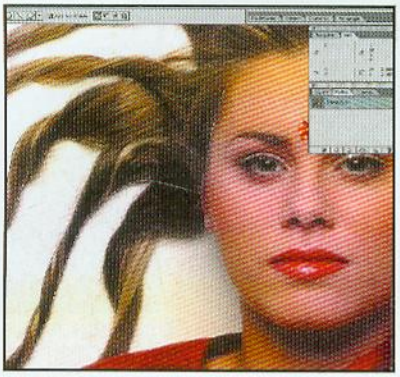
21 Draw a series of closed paths on her arms for highlights. Create a selection from the paths and fill it with a light colour sampled from her forehead. Deselect and Gaussian Blur the highlights by 10 pixels. Reduce the opacity of the layer and choose Merge Visible from the Layers palette. >

Part 3: Hair-raising techniques

The next stage is to add some strands of hair behind the headdress so they look like they're rising up from her head...

Planning

A little bit of planning at the photography stage can save you a lot of extra work in *Photoshop*. By simply shooting the model lying on her back so that her hair could be spread out, we avoided having to recreate that effect in *Photoshop*. Also, twisting the hair into strands was easier than it would have been to isolate our own sections of hair. Good communication with the photographer, and the aid of a rough sketch at the planning stage, will often save you hours in front of your computer later on.



1 Open the file hair.tif and select the Pen tool. Draw a closed path around the two complete hair strands at the left of her eye. Don't worry too much about the ends, just crop it straight across. Generate a selection from the path.

2 Open the file with the merged file of the woman in it, if it isn't already open. Drag the contents of your selection into this file as a new layer. Move the layer down to the bottom in the Layers palette. Use Free Transform to resize, rotate and position the hair.

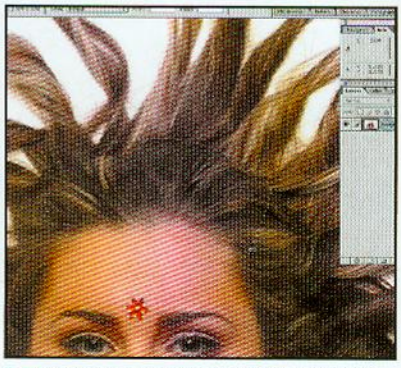
3 Duplicate this layer and use Free Transform to adjust the rotation. Move it up slightly in the image. Link the two layers in the Layers palette and merge them. Duplicate the merged layer and drag it to the right.

4 Use Free Transform, hold down the Control key (Mac) and click or Right-click (Windows) in the bounding box and select Flip Horizontal from the drop-down menu. Move it into place so that it fits behind the headdress just like the left half.

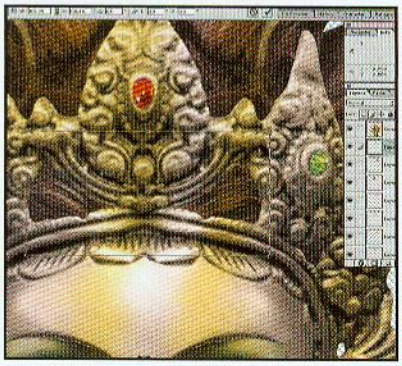
5 In the file hair.tif, draw a closed path around the complete strand of hair to the lower right of the image. Generate a selection, and drag the contents into the working file. Use Free Transform to resize and rotate the section of hair, and position it as you see here.

6 Drag the layer to the bottom of the hierarchy in the Layers palette. Duplicate it, use Free Transform to flip it horizontally, and drag it into the same position at the right. Duplicate this layer. Drag the duplicate up to the empty area at the top.

7 Use Free Transform to rotate it and move it over to just left of centre. Duplicate this layer again and use Free Transform to flip it horizontally. Drag it to the right so that it's positioned just like the one opposite to the left.



8 In the hair.tif file, draw a closed path around the mass of hair just above her forehead – not the strands, just the mass of hair. Generate a selection from the path and drag the contents of the selection into the working file. Move it up in the layers hierarchy, just below the woman.



9 Position it so that it's filling the holes left by the crown. Use Free Transform to enlarge it to cover the area completely. Command-click (Mac) or Ctrl-click (Win) the layer icon to generate a selection. Command-Shift-click or Ctrl-Shift-click all the other hair layer icons to add them to the selection.

Part 4: Adding ribbons

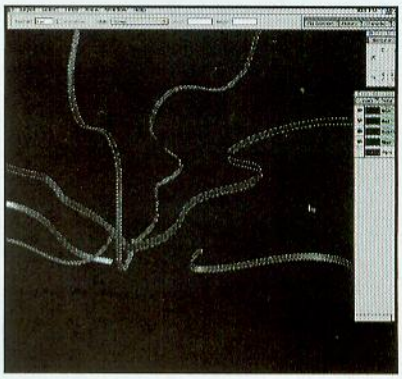
We'll now fix up the strands of hair so that they look like they belong together, and add some flowing ribbons to the image...

Alpha channels

In the render settings of most 3D applications, you'll be given the option to render an alpha channel. This places a channel in your rendering with the selected area around your 3D object(s). Rendering your image with a channel can save you time you'd otherwise have spent drawing around your objects with the Pen tool, or painting around them in quick mask mode. Both of our ribbon images were rendered with alpha channels.

1 Create a new layer and position it just under the woman layer in the hierarchy. Keep the selection active and select the Clone Stamp tool. Use a small soft-edged brush with opacity set to 100 per cent to clone over areas where sharp edges of hair on different layers overlap.

2 Create a new layer with a multiply blending mode. Inside the current selection, select the Brush tool and sample a darker colour from her hair. Use a low opacity setting and soft brush tip to paint around the edges of the hair strands and down by her forehead.



3 Deselect. Create a new layer set and add all the hair layers to it, including the layer that you did the cloning on, and the multiply layer. Open ribbons1.pct from the CD. In the channels palette, Command-click (Mac) or Ctrl-click (Windows) the alpha channel icon to generate a selection from it.

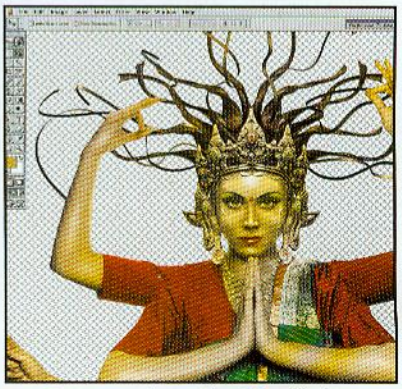
4 Return to the Layers palette and use the Move tool to drag the contents of the selection into the working file. Use Free Transform to adjust the size and position it so that the centre point of the ribbons is behind the centre of the headdress.

5 Duplicate the layer and change the blending mode of the duplicate to Soft Light. Command-click (Mac) or Ctrl-click (Windows) the layer icon to generate a selection from it. Create a new layer with a Colour blending mode. Sample a colour from the headdress and fill the selection with it.

6 Deselect. Open ribbons2.pct from the CD. Command-click the alpha channel icon in the Channels palette to generate a selection from it. In the Layers palette, use the Move tool to drag the contents of the selection into the working file.

7 Use Free Transform to resize and rotate the ribbons so that they sit under the headdress in the same way the previous ribbons did. There are now too many ribbons on this layer, so use the Lasso tool to draw selections around a few of them and delete them.

8 Draw a selection around the ribbon on the bottom right of the layer. Hold the Command key (Mac) or Ctrl key (Windows) and move this ribbon up a little higher. Deselect. Duplicate the layer and change the blending mode to Soft Light. Command-click (or Ctrl-click in Windows) the layer icon to generate a selection from it.



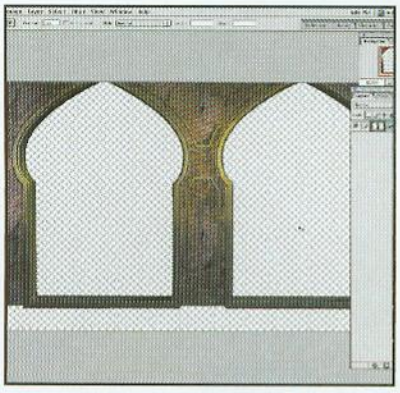
9 Create a new layer with a Colour blending mode and fill the selection with the current foreground colour – it should be the same colour you sampled from the headdress. Deselect. Create a new layer set and add all of the ribbon layers to it. ca-p

Part 1: Building a wall

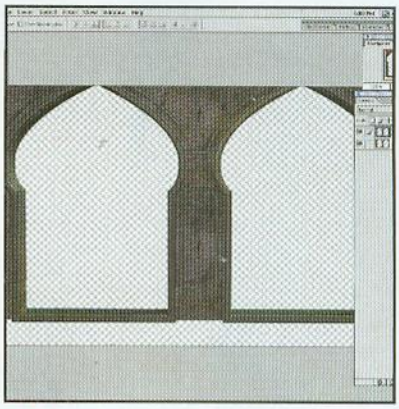
We'll build the background wall by combining a couple of 3D rendered images, and using *Illustrator* and *Photoshop* together to decorate it...

Not using Illustrator?

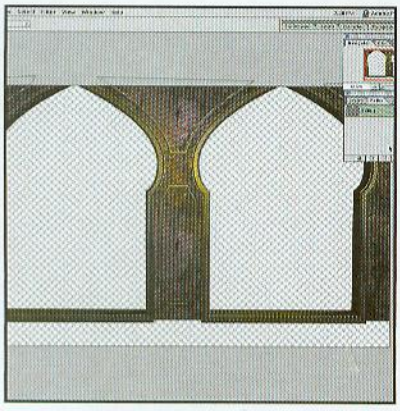
If you're not using *Illustrator*, it's still possible to follow this tutorial. Just skip over the parts where we create the blended shapes and copy and paste them into *Photoshop*. Instead, select the Custom Shape tool. In the Custom Shape picker, select Load Shapes from the drop-down menu and navigate to the file 'stars and moons.csh' in the Tutorial\Section 3 folder on the cover CD. With this shape loaded and selected in the picker, the Custom Shape tool will create this shape when clicking and dragging. Remember to hold down the Shift key to constrain the aspect ratio.



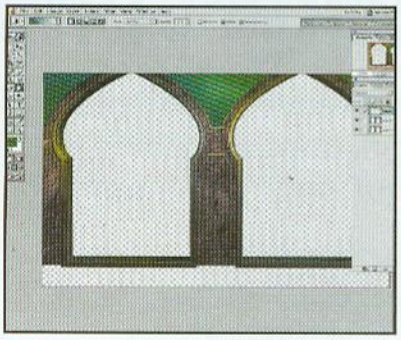
1 Open the file: back1.psd. Double-click the background layer and name it. In the Channels palette, Command-click (Mac) or Ctrl-click (Windows) the alpha channel icon to generate a selection from it. Return to the Layers palette, invert the selection (Command-Shift-I on the Mac or Ctrl-Shift-I in Windows) and delete.



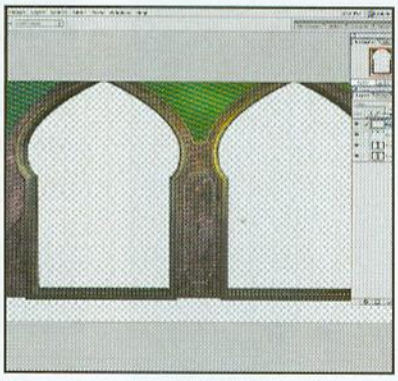
2 Open the file: back2.psd. Command-click (Mac) or Ctrl-click (Windows) the alpha channel icon to generate a selection from it. In the Layers palette, use the Move tool to drag the contents of the selection into the working file while holding down the Shift key.



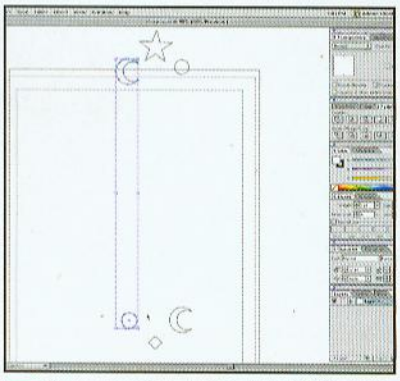
3 Change the blending mode to Overlay and reduce the opacity to 42 per cent. Select the Pen tool and draw three closed paths inside the panels on the archway walls. Command-click (Mac) or Ctrl-click (Windows) the path icon to generate a selection from it. Create a new layer.



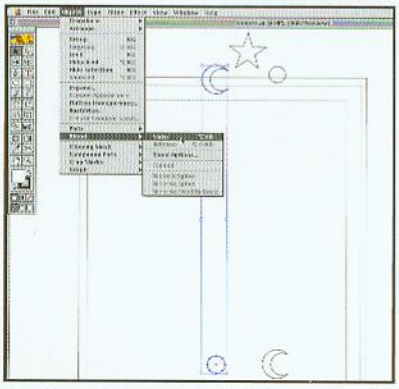
4 Create a new foreground colour of C:64, M:18, Y:47, K:11, and fill the active selection. Create a slightly darker foreground colour in the picker. Select the Linear Gradient tool, set opacity to 100 per cent and set to 'foreground to transparent'. Then introduce a couple of gradients into the active selection.



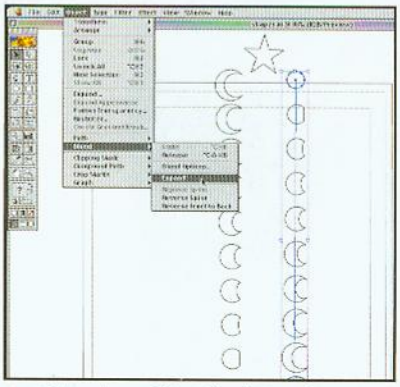
5 Use the Pen tool to draw a closed path around the inside of the panel on the central post. Generate a selection from the path and create a new layer with a Colour blending mode. Reduce the opacity of the layer to 70 per cent.



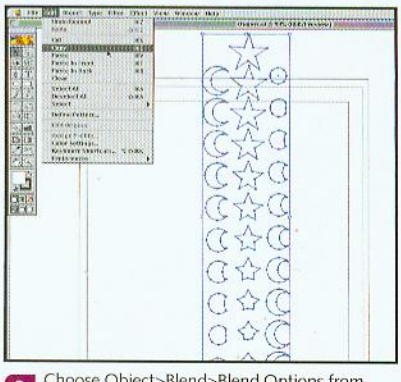
6 Create a new foreground colour of C:75, M:35, Y:50, K:35 in the picker and fill the active selection with it. Deselect. Launch Adobe *Illustrator* and open the file: shapes.ai. Select the moon at the upper left and the circle at the lower left.



7 Choose Object>Blend>Blend Options from the menu. Select the specified steps option and enter 8 as the number of steps. Then choose Object>Blend>Make from the menu to create an 8-step blend between the objects.



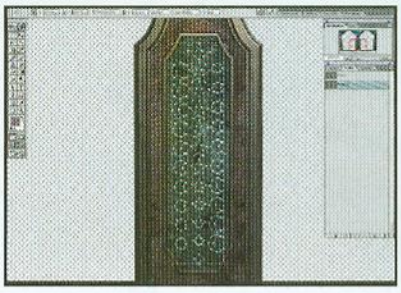
8 Then choose Object>Blend>Expand to create actual paths from the blend. Select the circle at the upper right and the moon at the lower right. Choose Object>Blend>Make from the menu, then choose Object>Blend>Expand.



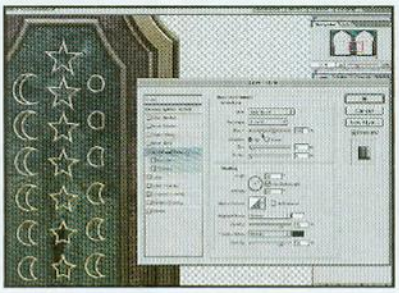
9 Choose Object>Blend>Blend Options from the menu. Change the number of steps to 10. Select the Star and the diamond. Choose Object>Blend>Make, then choose Object>Blend>Expand. Select all of the shapes in the file and copy.

Multiple renderings

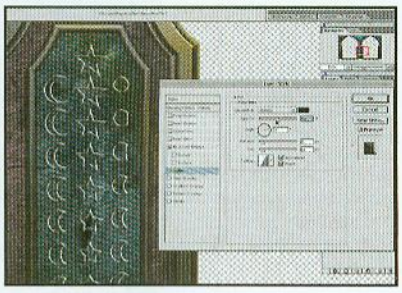
When you've created a 3D model and are ready to render, why not try some other options? Try rendering the scene with lights in different positions, for example. Also try using different textures or different specular and reflection properties. It really doesn't take much additional work to try some different options when the 3D model is built. Most 3D programs will have a rendering queue to which you can add your various options and render them all, one after another. Then you can open all your finished renderings in *Photoshop* and pick and choose which ones you like best. Try experimenting with two different images overlaying each other in the Layers palette with different blending modes, just like we did with the background arches. With very little effort you can greatly increase your options.



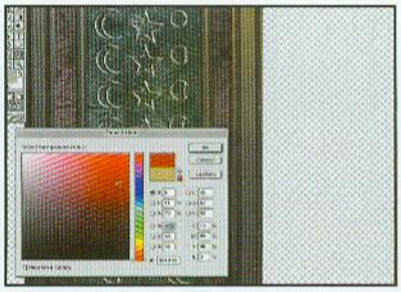
10 In *Photoshop*, paste. Choose Paste As: Path in the resulting dialog box. Use Free Transform to adjust the size of the path so that it fits in the central panel. Hold down the Shift key to constrain the aspect ratio. Command-click (Ctrl-click in Windows) the path icon to generate a selection from it.



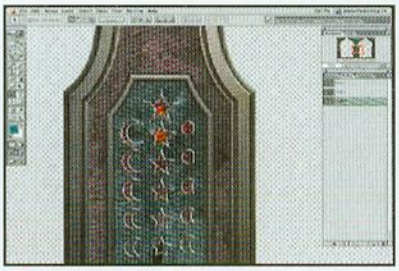
11 Sample a gold colour from one of the arches and choose Edit>Stroke from the menu. Choose a width of 10 pixels and specify Inside in the resulting dialog box. Add a Bevel and Emboss layer effect from the drop-down menu at the bottom of the Layers palette.



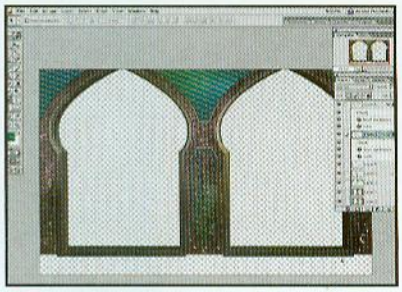
12 Adjust the settings so that it looks as if the stroke is a smooth raised surface on the wall with the light coming from the upper right. In the left side of the dialog box choose Satin and enable it by checking the checkbox. Adjust the settings so that it darkens the bevel.



13 With this selection still active, create a new layer with a Colour blending mode. Move it below the current layer in the Layers palette. Select the Linear Gradient tool with opacity set to 100 per cent, and set to 'foreground to transparent'. Select a red foreground colour.



14 Draw a gradient downwards within the selection. Create a green foreground colour and drag a gradient inside the selection from the bottom upwards. Use the Paths Selection tool to select a star and moon from the path and copy. Create a new path in the Paths palette and paste. Reposition them above the wall panel.

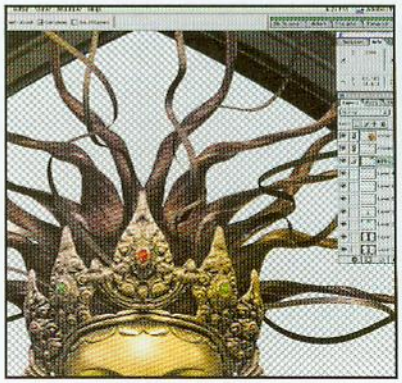


15 Hold down the Option key (Mac) or Alt key (Windows) and drag them around to make duplicates. Use Free Transform on some to adjust the sizes. Make a selection from the path and fill it with a sampled gold colour. Drag the existing effects in the Layers palette onto this layer icon as well.

Part 2: Adding the model

Now it's time to bring the woman figure into the image and join her hair to one of the existing doorways to make her part of the scene...

1 Open your working file of the woman. Merge the hair layer set and also merge the ribbons layer set. Link the three layers. Use the Move tool and click and drag on the canvas area. Drag her right into the background working file.



2 Make sure that the three new layers, in their current order, are at the top of the hierarchy in the Layers palette. Use Free Transform to reduce her size. Reposition her so that her hair bleeds off the top of the image. Select the bottom layer.

3 Select the Magic Wand tool (w). Set the Tolerance to 32, enable Contiguous and Anti-Aliased. Click inside the archway to make a selection of the open area. Select the hair layer. Invert the selection and delete the hair within the inverted selection. Deselect. >

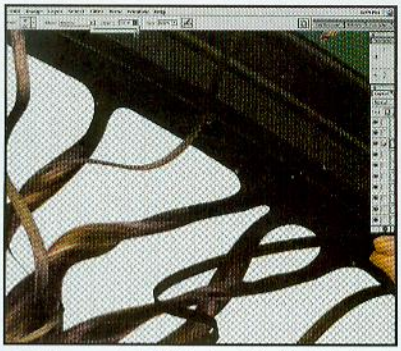
Adding the model continued...

Moving layers

When dragging layers from file to file, you can preserve the initial position of the original by holding down the Shift key when you drag the layer. This way, when you drag your layer into a new file, the exact location doesn't change at all. However, in order for this to work properly there are a couple of things to keep in mind. First, both files must be of identical dimensions, right down to the pixel. Second, you must have no active selections in either the source or the destination file.

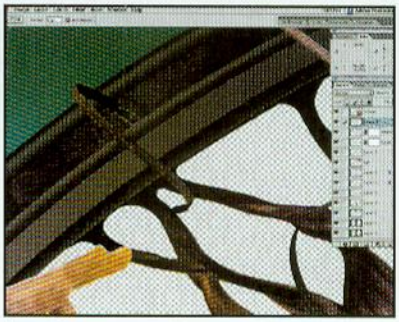
4 Command-click (Mac) or Ctrl-click (Windows) the hair layer icon to generate a selection from it. Create a new layer above the hair layer but below the ribbons layer. Select the Radial Gradient tool, set to 'foreground to transparent' with an opacity of 100. Sample (Option-click on the Mac or Alt-click in Windows) a dark colour from within the archway.

5 Within the selection on the new layer, draw a gradient from the end of each piece of hair inward so that the ends appear darker. Deselect. Use the Pen tool to draw a closed path around the end of each piece so that it looks like it widens and joins the archway.

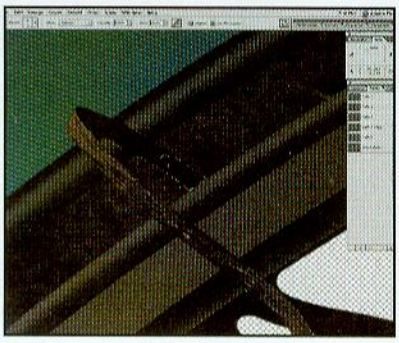


6 Command-click (Mac) or Ctrl-click (Windows) the path icon to generate a selection from it. Create a new layer. Sample the darkest colour from the archway and fill the selection with it. Deselect. Add a layer mask and select a large soft brush with a foreground colour of black and an opacity of 100 per cent.

7 Paint the mask over all the areas where there's a hard edge overlapping the hair – this makes the effect look gradual. Select the ribbons layer in the Layers palette. Draw closed paths over the three areas of ribbon at the left like you see here. Generate a selection from the paths.



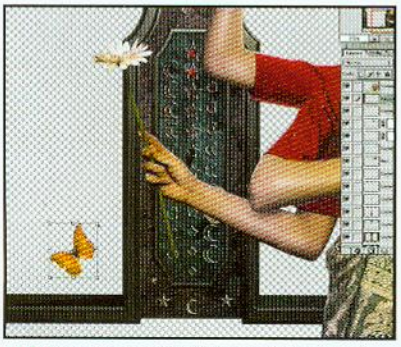
8 Choose Layer>Add Layer Mask>Hide Selection from the menu. Create a new layer on top of the ribbons layer. Use the Pen tool to draw a closed path around where this strip of ribbon would continue, if it were longer, to tuck under this part of the wall detail.



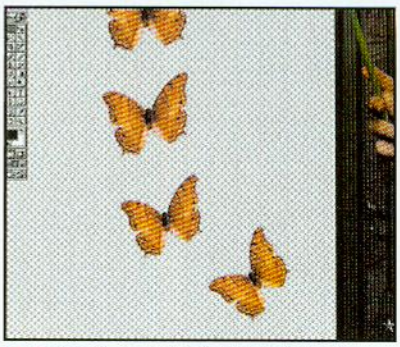
9 Generate a selection from the path. Select the Clone Stamp tool and use it within the selection to add more ribbon to the empty area. Use an opacity of 100 per cent and make sure Use All Layers is enabled. Deselect.

Part 3: Morphing effects

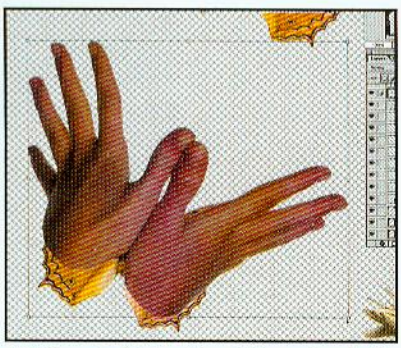
To add an even more surreal feeling, we create a hallucinogenic butterfly, which gradually morphs into a pair of flying hands...



1 Open the file: butterfly1.psd. Draw a closed path around the butterfly, omitting the antennae. Generate a selection from the path and drag the contents of the selection into the working file. Use Free Transform to resize and reposition the butterfly. Duplicate the layer.

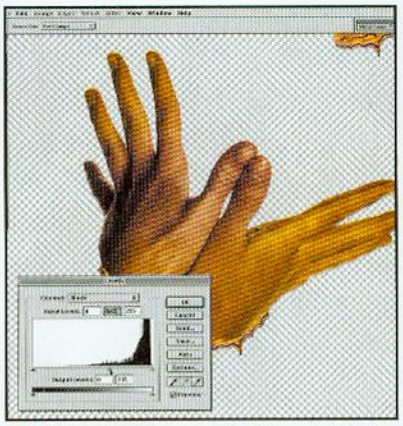


2 Move it up and slightly to the left. Use Free Transform to rotate and skew it. Continue to make duplicates and rotate and skew them until you have a row of butterflies moving up the page like the opening illustration. Link the butterfly layers and merge them (Command-e, or Ctrl-e in Windows).

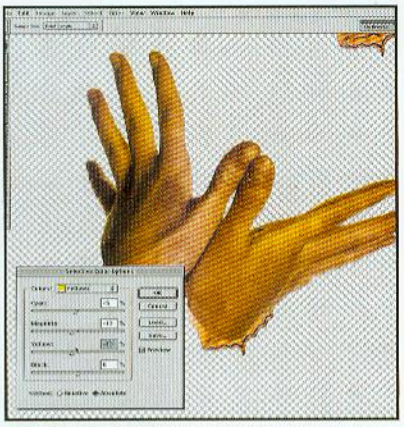


3 Open the file: hands1.psd. Draw a closed path around the hands, cutting them off at the wrist. Generate a selection from the path and drag the contents into the working file. Use Free Transform to resize and rotate the hands. Position them over the fifth butterfly up.

4 Duplicate the layer and change the mode to Overlay. Command-click (Mac) or Ctrl-click (Windows) the duplicate layer icon in the Layers palette to generate a selection from it. Create a new layer and sample a colour from the butterfly. Fill the selection with the new foreground colour.



5 Reduce the layer opacity to 69 per cent. With the same selection active, create a new levels adjustment layer. In the Input Levels choose the Magenta Channel and drag the highlight slider to the left a little. Then, in the Black Channel, drag the midtone slider to the right.



6 Command-click (Mac) or Ctrl-click (Windows) the adjustment layer's mask icon to generate a selection from it. Create a new selective colour adjustment layer. Select Absolute mode. In the Yellows, reduce the cyan by 5, and reduce the magenta and the yellow by 13.

7 Link all the hand layers and merge them. Name the new layer 'hand', and drag it beneath the butterflies in the Layers palette. Select the Eraser tool, with a large soft brush and opacity set to 100 per cent. Erase some of the wings on the butterfly layer where they overlap the hand.

8 Command-click (Mac) or Ctrl-click (Windows) the hand layer icon and Command-Shift-click (Ctrl-Shift-click in Windows) the butterflies layer icon to create a combined selection. Create a new layer and select the Brush tool. Specify a medium-size soft-edged brush with a low opacity setting of around 20 per cent.

9 Sample colours from the hand and butterfly, and paint over areas within the selection to make things smoother. Reduce the size of the brush and the opacity. Sample a lighter colour and paint some highlights over the raised areas of the hand.

10 Keep the selection active and create a new layer. Select the Smudge tool. Make sure Use All Layers is enabled and set the strength to 50 per cent. Use a large soft brush within the selection to smudge the contents of the underlying layers together gently.

11 Again, with the selection active, create a new layer. Select the Brush tool with an opacity setting of 50 per cent and a medium size soft brush tip. Sample one of the darkest areas of the hand and paint around the edges of the hand within the selection where shadows should occur. Deselect.

12 Duplicate the hand layer. Reposition the contents so that it lies behind the butterfly below the previous one. Use Free Transform to resize and rotate the hands. Use the Lasso tool to draw a rough selection around the thumbs and move them down so that they look shorter.

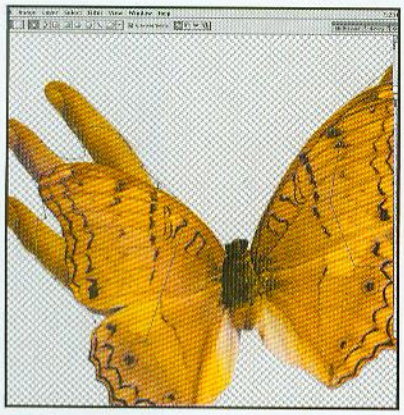
Morphing effects continued...

More is better

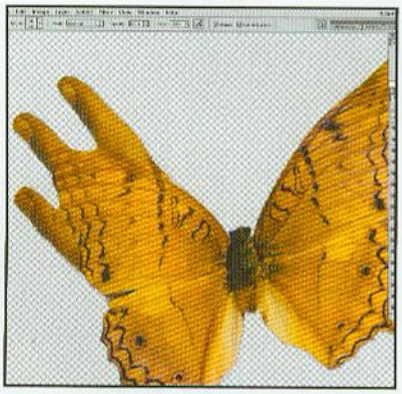
Having the necessary images can really be the factor that turns an average illustration into an exceptional one. With things like the hand photos, The Walcot Studio just kept on shooting the hands in different positions and gave us a load of files to sift through. The result is the illusion of movement because we're using three hand shots in slightly different positions. Cutting corners to save time at the photography stage would have been detrimental. Working with only one hand shot would never have conveyed the feeling of movement well, no matter how much manipulation we'd done in *Photoshop*.

13 Again, use the Eraser tool on the butterflies layer to erase some of the wing areas that overlap. Generate a selection from the two layers together and on the new layers (above the butterflies layer) paint, smudge, and darken the edges in the same way you did previously. Deselect.

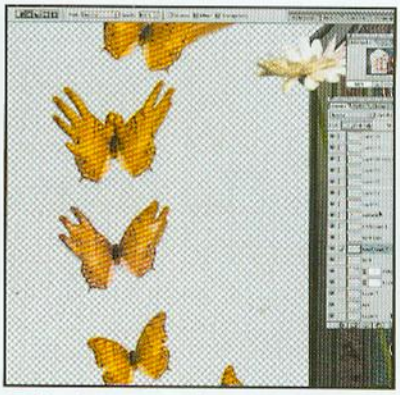
14 Duplicate the hand copy layer and position it behind the butterfly that lies below the previous one. Use the Lasso tool to select everything but the top three fingers of each hand and delete it. Select the remaining fingers of each hand with the Lasso tool and reposition them.



15 Generate a selection from the contents of this layer combined with the butterflies layer. Create a new layer above the butterflies layer and use the Pen tool to draw closed paths that add extra area to where the fingers and wings meet, like webbing.

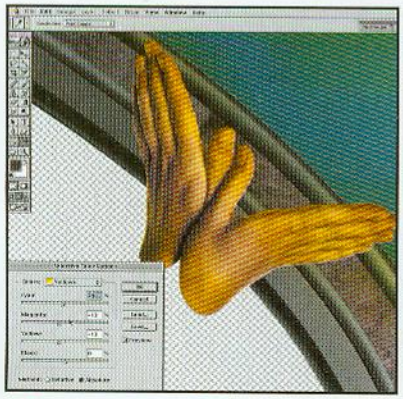


16 Command-Shift-click (Mac) or Ctrl-Shift-click (Windows) the path icon to add it to the current selection. Use the Clone Stamp tool within the selection to fill in the webbing areas by sampling areas from the wings and fingers. Start with 100 per cent opacity and smooth it using lower opacity settings.

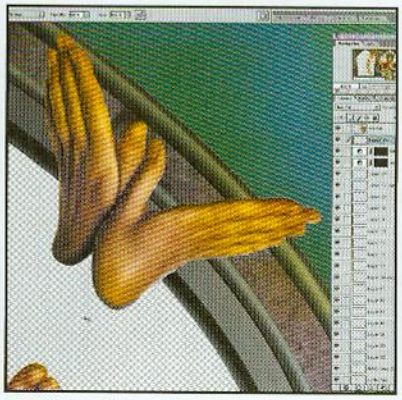


17 Again, on a series of layers above the butterflies layer, paint, smudge, and paint shadows and highlights to blend together the fingers and the wings of this butterfly/hand instance. Deselect and duplicate the first hand layer you created. In the Layers palette move it above the butterflies layer.

18 Reposition it so that it sits in front of the top butterfly. Add a layer mask and paint on the mask to mask out the bottom hard edge of the hands. Create a series of layers above this one like you did previously for the other instances to blend things together.



19 Open the file: hands2.psd. Draw a path around the hands, select them and bring them into the working file. Adjust the size, and position them above the top butterfly. Again, use the methods you used for the first hand to build up a series of layers. This time there'll be no butterfly.



20 Now add the shadows around the edge. Carefully create a closed path around one hand. Paint within this selection and then invert it, and do the other half so that the shadows for each hand don't overlap on the thumbs. Open the file: hands3.psd.

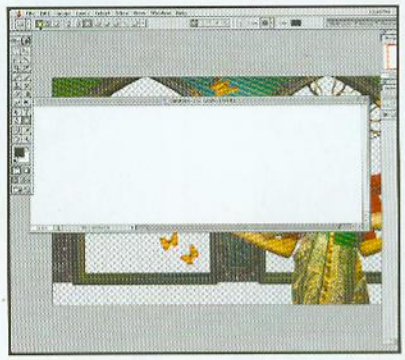
21 Go through the entire procedure one more time with this hand shot. Bring them into the working file, create various layers to adjust the hands, and position them above all the others. Create a layer set and add all the hand and butterfly layers to it.

Part 4: Tiles made from shapes

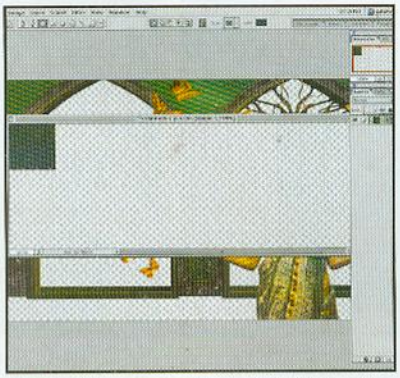
You can employ many of *Photoshop's* shape tools to create an ornate tiled floor to place in proper perspective within the background file...

Shifting things

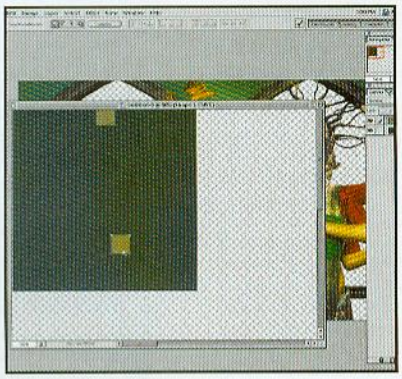
Holding down the Shift key while using the Move tool can often prove useful. When we were filling the canvas with duplicate layer sets it was important that the sets all matched up nicely. By holding down the Shift key while moving, we were able to constrain the movements to straight lines either vertically or horizontally. All diagonal movements were also constrained to 45 degrees.



1 Create a new file, CMYK mode, about the same width as the background image file and approximately half the height. Keep your background working file open because you'll need to sample colours from it. Select the Rectangle shape tool (U), and choose 'shape layers' in the tool options bar.

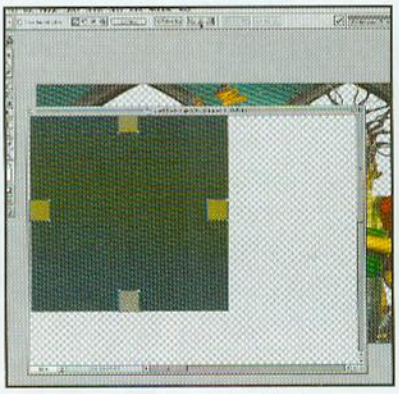


2 Hold down Option (Mac) or Alt (Windows) to access the Eyedropper and sample a dark blue colour from the background file. Hold down the Shift key and draw a square in the upper left-hand corner using the Shape tool. Delete the background layer by dragging its icon into the trash.

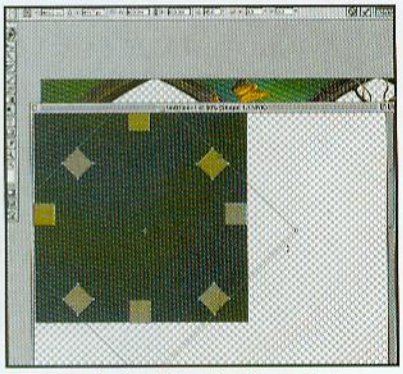


3 Sample a light brown colour and draw another small square. Move it to the top of the canvas. Use the Path Selection tool (a, or hold down the Command key while using the Shape tool), hold down Option (Mac) or Alt (Windows) and click and drag the small rectangle to make a duplicate.

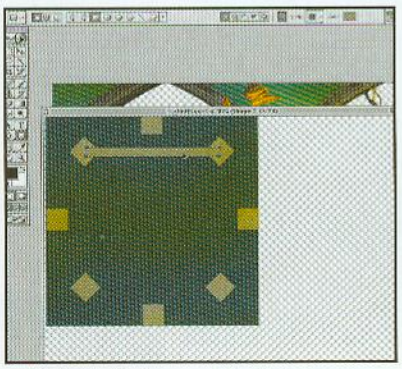
4 Move it to the bottom of the large square. Use the Path Selection tool and hold down Shift to select the other small square as well. Click on the 'align horizontal centres' button in the tool options bar and click the Combine button to combine them into a single shape.



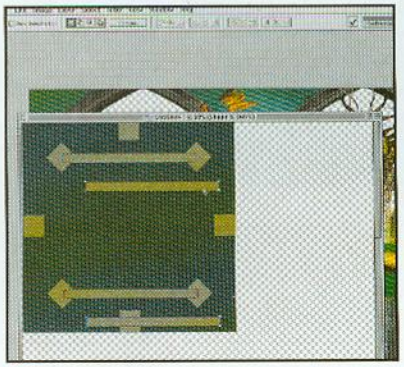
5 Use the Path Selection tool holding down Option (Mac) or Alt (Win) to click and drag the combined shape to duplicate it. Use Free Transform to rotate the duplicate 90 degrees. Use the Path Selection tool to select the two combined shapes. Align them centred horizontally in the tool options bar.



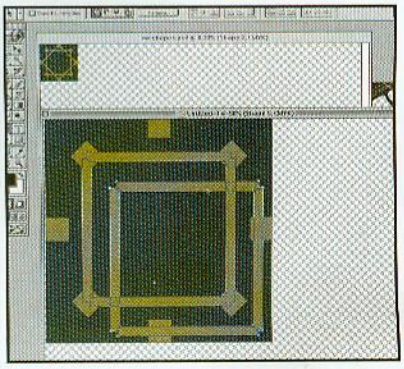
6 Also, align by clicking the 'align vertical centres' button in the tool options bar and click Combine to combine all four squares into a single shape. Duplicate the shape using the Path Selection tool, holding down the Option or Alt key, and clicking and dragging. Rotate the duplicate 45 degrees using Free Transform.



7 Select both shapes and align their centres horizontally and vertically in the tool options bar. Position them to fit within the large blue square. Draw a long thin rectangle using the Shape tool between the two rotated top squares. Select it with the Path Selection tool.



8 Hold down the Option (or Alt) and Shift keys and drag a copy between the two lower rotated squares. Select these two new shapes and click Combine in the tool options bar. Use the Path Selection tool, hold down Option or Alt and click and drag the new shape to make a duplicate.

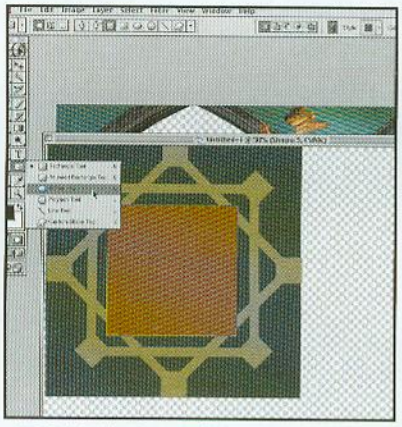


9 Use Free Transform to rotate the shape 90 degrees. Use the Path Selection tool to move it into place like you see here. Select the two shapes and click Combine in the tool options bar. Duplicate the shape by dragging with the Path Selection tool and holding down the Option or Alt key.

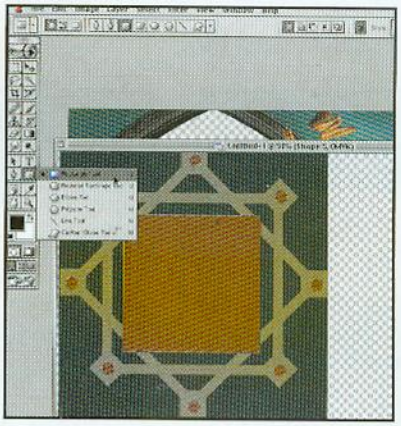
Tiles made from shapes continued...

Why layer sets?

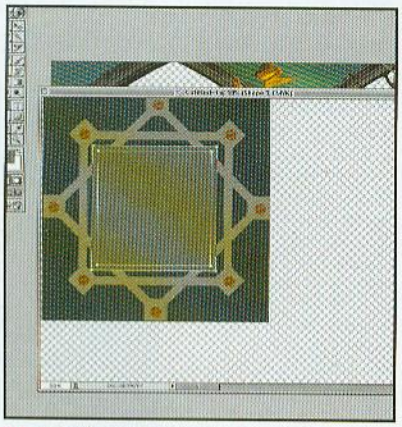
It may seem like we're building a cumbersome file here with all the linked layer sets. You're probably wondering why we don't just merge the sets and then merge all of the resulting layers into one, so that we only have to drag a single file into the working file. Agreed, this would be easy transport, but the next step – altering the perspective – is why we want to keep the sets. When you merge a set containing shape layers, it'll rasterize them and convert them to pixels. By not merging the sets, we can perform a drastic perspective adjustment without deteriorating the quality of the image. The layers within the sets are still shape layers and as a result are resolution independent. This means that drastic scaling and adjusting won't affect their quality. They will still appear sharp after the perspective adjustment.



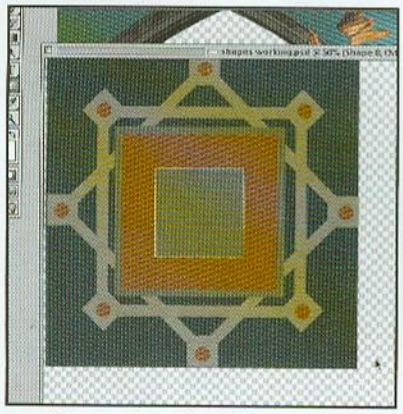
10 Rotate the shape 45 degrees using Free Transform and position it like you see here. Select the two shapes and combine them into one. Sample an orange colour from the working image and draw a large square. Select the Ellipse tool from the Shape tool pop-up in the toolbar.



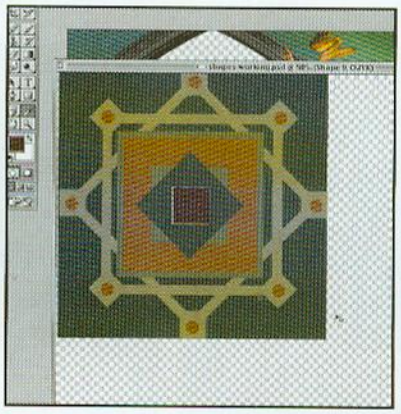
11 Hold down the Shift key and draw a small circle over one of the small squares. Use the Path Selection tool, holding down the Option key (Mac) or Alt key (Windows), to drag copies of the circle and place them over the remaining small squares. Select the Rectangle shape tool.



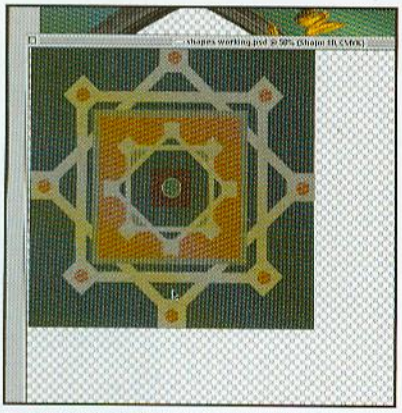
12 Sample a green colour from the background image file and draw a square that covers the big orange one. Hold down the Shift key and draw a second square that's a little smaller than the first. Select them both with the Path Selection tool and align their centres vertically and horizontally.



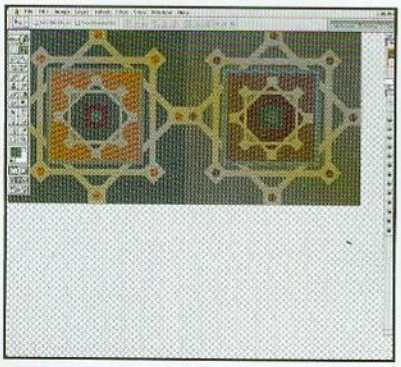
13 With them both selected, return to the Rectangle shape tool, and in the tool options bar click the 'exclude overlapping shape areas' button to subtract the smaller square from the larger one. Draw a smaller square in the centre of the previous ones.



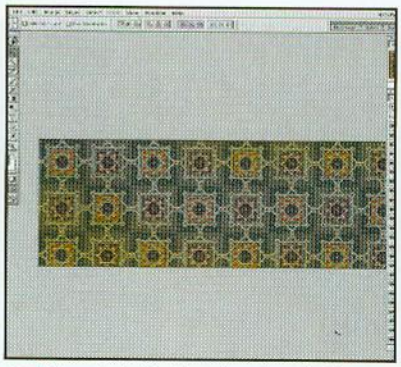
14 Duplicate this layer in the Layers palette and use Free Transform to rotate the square by 45 degrees. Sample the blue colour from the big square and fill this shape with the foreground colour. Sample a red colour from the other file and draw a small square in the centre.



15 Duplicate your second and third shape layers (the ones with the light brown squares and rectangles). Move them to the top of the Layers palette and link them. Use Free Transform to resize them and centrally position them. Sample a lighter blue and draw a circle right in the centre.



16 Create a layer set and add all of the layers to it. Duplicate the set and use the Move tool (v) to move it to the right. Within the set, select individual layers, sample colours from the background image and fill them with the new foreground colours (Option-Delete or Alt-Delete), so that this tile has slightly different colours.



17 Keep duplicating the sets and moving them around the canvas until you've filled the entire area with a checkerboard pattern. Link all the sets. Select the bottom arch layer in the background file. In the shapes file, use the Move tool to click anywhere on the canvas and drag it into the background file.

18 Move the selected/bottom arch layer above all the shape layer sets. Select any one of the shape layer sets, and use Free Transform to adjust the size and the perspective so that the floor looks like it belongs in the existing scene.

Part 5: The panel backgrounds

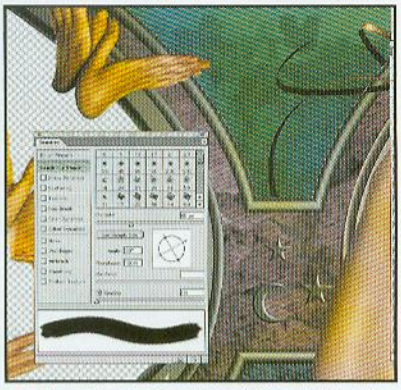
Here we delve into the *Photoshop 7* paint engine to create some wall murals and add a sense of the tactile realm to our scene…

Scatter effects

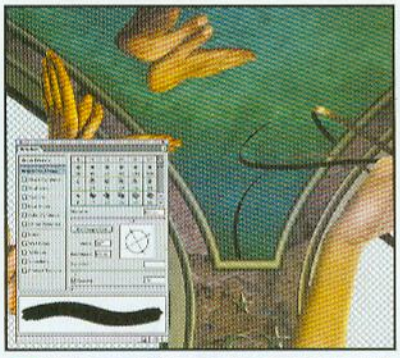
Brush scatter determines the amount and placement of marks within each individual stroke. The greater the amount of scatter you apply, the greater the variance of these two settings. Scatter is a good way to add a feeling of randomness to your digital art. It lends it a sense of real world imperfection that's inherent in traditional painting. When you have Both Axes enabled, the brush marks are distributed or scattered in a radial direction. But if Both Axes isn't enabled, the marks in the stroke are scattered perpendicular to the direction of the stroke.

1 In your working file, create a new layer above the layer containing the coloured panels at the upper part of the arches. Command-click (Mac) or Ctrl-click (Windows) the first path icon in the Paths palette to create a selection around the panels. Select the Brush tool (b).

2 In the tool options bar, click the Brushes palette toggle button to open the floating Brushes palette. Click on the brush presets at the upper left of the palette. Select the preset named chalk 17 pixels. Adjust the Master Diameter slider to increase the brush diameter.

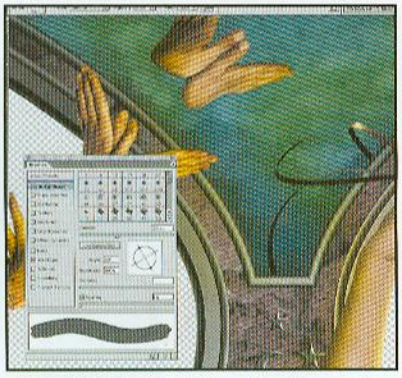


3 From the left side of the palette, select Brush Tip Shape. Change the angle of the brush tip to 30 degrees and reduce the spacing to 1 per cent. Reduce the brush opacity to 50 per cent and sample some colours from the panels. Begin painting small vertical strokes using different sampled strokes.

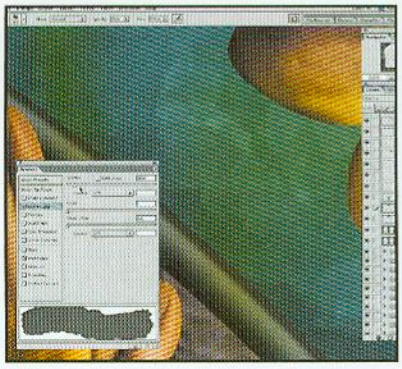


4 Continue with these small vertical strokes until you've painted the entire area inside the selection, covering the three panels. Feel free to paint some horizontal strokes. Change the brush opacity to 25 per cent and increase the brush diameter. Paint in another series of strokes using these settings.

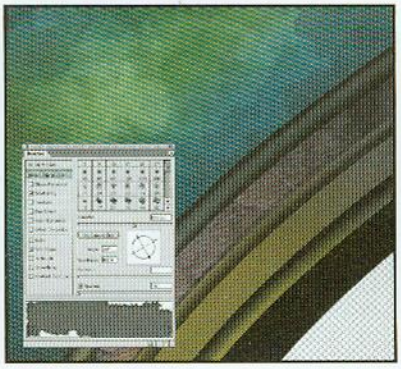
5 Enable Wet Edges in the Brushes palette and increase the opacity of the brush to 70 per cent in the tool options bar. Sample various colours from the parts you've already painted and paint over the area here and there using the wet edges and higher opacity setting.



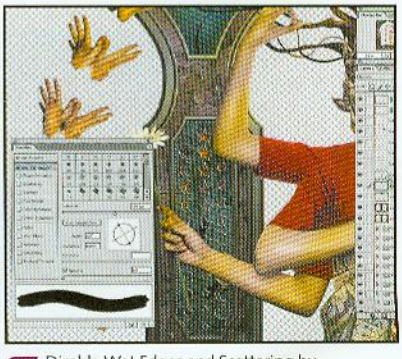
6 Sample some blue colours from the panel on the central pillar. Paint in a few strokes using the blues at the bottom of these panels using the same brush settings. Select some lighter blues and greens from the picker. Reduce the size of the brush and the opacity, and paint some strokes.



7 Click Scattering in the left of the Brushes palette and make sure it's enabled by clicking the checkbox. Increase the scatter slider to 85 per cent and paint some strokes on your panels. Use varying brush opacity and different colours sampled from the panels.



8 Click the Both Axes checkbox in the scatter settings and increase the scatter amount to 150. Paint some strokes with this setting, mainly using dark colours. Increase the brush tip size, reduce the opacity and paint some more using a much lighter foreground colour.

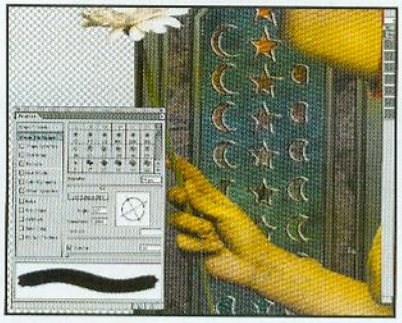


9 Disable Wet Edges and Scattering by unchecking their checkboxes at the left of the Brushes palette. Increase the opacity of the brush in the tool options bar to 50 per cent. Command-click (Mac) or Ctrl-click (Windows) the layer icon for the blue coloured panel on the central pillar to generate a selection from it.

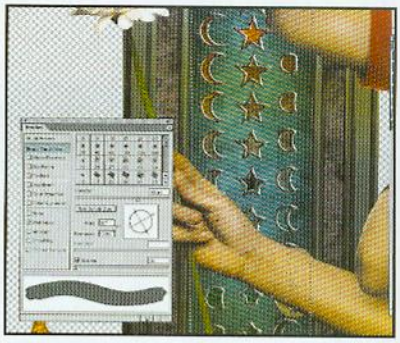
The panel backgrounds continued...

Dual brush

A fantastic way to create very unique looking brushes is to use dual brushes from the Brushes palette. The Dual Brush option essentially uses two different tips to create brush marks. There are so many different brush combinations that the options are enormous. Experimentation in this area of *Photoshop* can often yield exceptional new brushes that'll surprise you. There's also the option of adjusting the blending mode for how the two brushes combine, as well as functions for scatter, spacing, count and diameter.



10 In the Paths palette, Command-Option-click (Mac) or Ctrl-Option-click (Windows) the path icon that contains the moon and stars blends to subtract it from the current selection. Sample some blue colours from the central pillar panel and begin to paint within the selection on the same layer that you've been using for the top panels.

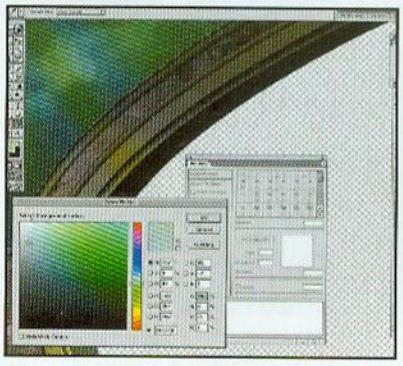


11 Enable Wet Edges in the Brushes palette. Increase the brush tip size and paint within the selection using colours sampled from the central pillar panel. Sample a much lighter colour, increase the brush size and decrease the opacity. Paint some strokes in the centre of the panel.

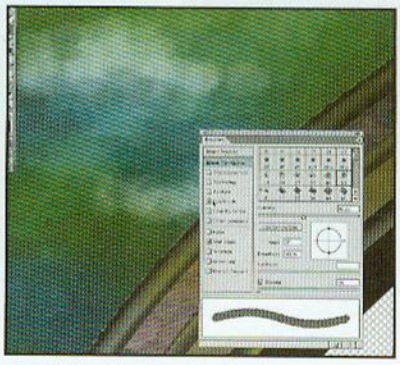
12 Enable the scatter function by clicking on the Scattering checkbox. Increase the amount to 200 per cent and make sure both axes are enabled. Increase the brush tip size and sample some dark colours from within the panel, then paint some strokes around the edges.

Part 6: Clouds and hands

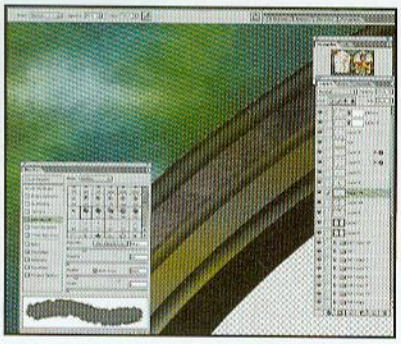
With the paint backgrounds complete, you can now focus on creating some clouds and making the hand/butterfly look like it blends into the background...



1 Create a new layer. From the brush presets, choose the spatter 59 pixel brush. Increase the diameter of the brush and reduce the spacing to 1 per cent. Reduce the opacity to 25 per cent. Select a very light green colour from the picker.

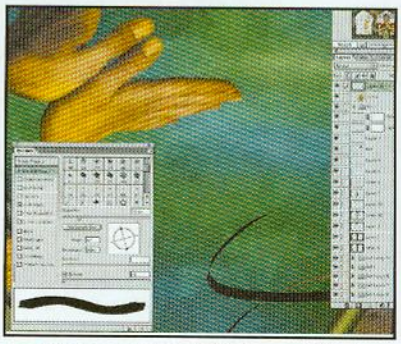


2 Click on the original panel path icon again to load it as a selection. Inside the selection, on the new layer, use the current brush to paint some rough cloud shapes in the panels. Enable Wet Edges and Dual Brush by clicking their checkboxes.

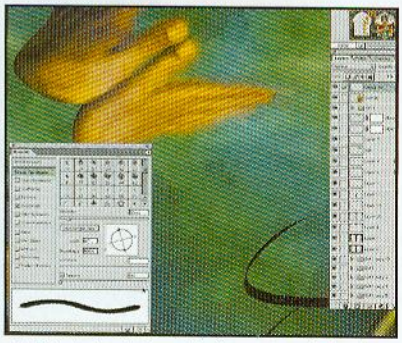


3 In the Dual Brush section, choose the chalk 17 pixel preset. Select a Multiply mode and increase the brush diameter. Set the spacing to 1 per cent, scatter to 114 per cent, enable Both Axes, and set the count to 1. Sample some slightly darker greens and paint on the underside of your clouds.

4 Use the same brush settings and sample some lighter colours and paint over the light areas of your clouds. Also sample some of the background panel colours, reduce the brush opacity even further and paint over the edges of the clouds to blend them into the background.



5 Create a new layer. In the Layers palette, drag the new layer to the top of the layer hierarchy. In the Brush Tip section of the Brushes palette select the chalk 36 pixels preset, adjust the angle to 16 degrees, reduce the spacing to 1 per cent, and set the brush opacity to 50 per cent.



6 Begin to paint over the fingertips and thumbs on the top set of hands on the new layer. Sample colours from the hands and the background. Use varying sizes and opacity settings for the current brush. Keep going until the hand appears to be blending into the painted area. cap

Part 1: Preparing a terrain map

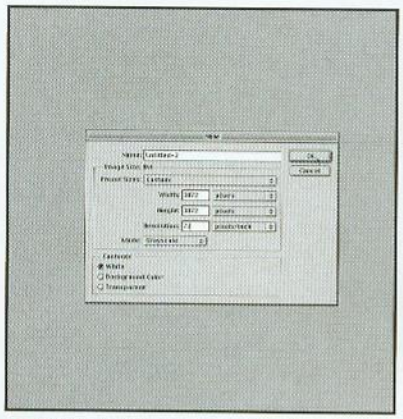
Start by creating a greyscale image in *Photoshop* that can be imported into *Bryce* for use as a terrain...

Not using Bryce?

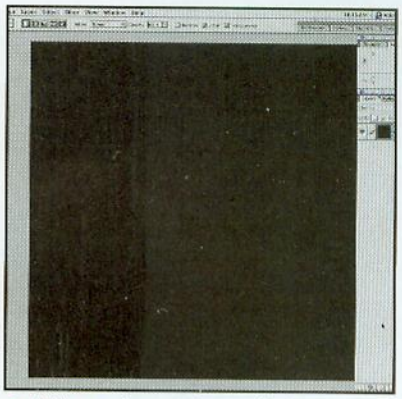
For those of you who aren't using *Bryce*, the finished renderings that you'll need for this tutorial are supplied on the cover CD. It's a good idea to follow along with the tutorial and go through the *Photoshop* aspects of this section as it'll help you gain an understanding of how 2D greyscale images translate into 3D terrains. For those of you who aren't using *Bryce* but are curious about the program, visit [w] www.corel.com for more info.

Using layers

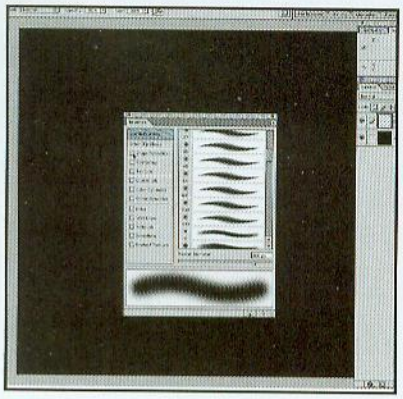
It's always a good idea to create your greyscale terrain images as multi-layered files. That way if you decide that some aspect is too light, you can easily reduce the opacity of only one layer and leave the effect of multiple layers intact. It also provides you with the option to mask out part of only one layer if you like, while leaving the others untouched.



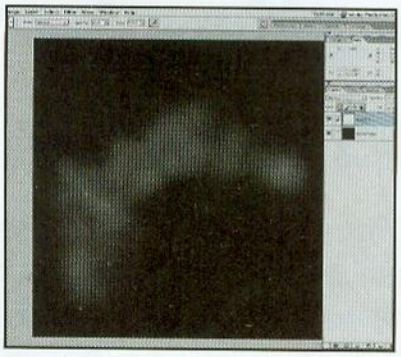
1 In *Photoshop*, create a new file. Make the size of the new file 3072 by 3072 pixels with a resolution of 72 pixels per inch. Choose Greyscale as the mode and click OK. Don't worry about the contents setting, because it doesn't matter for this.



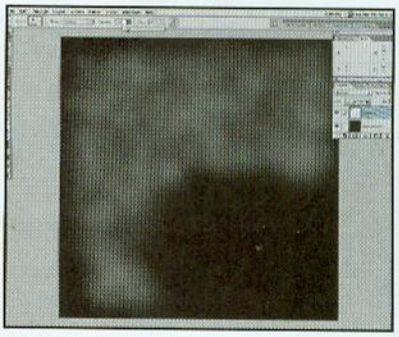
2 When you've created a new file, hit 'd' on the keyboard to set the foreground and background colours to their defaults: black and white. Fill the background with the foreground colour of black (Option-delete on the Mac or Alt-delete in Windows).



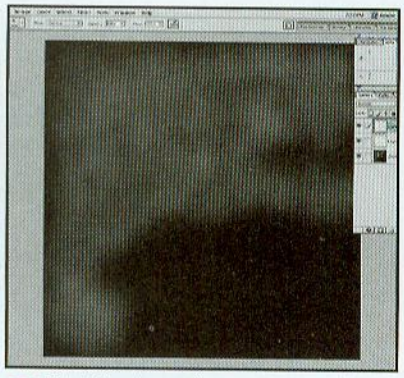
3 Make a new layer by clicking on the 'create a new layer' button at the bottom of the Layers palette. Select the Brush tool (b). From the brush presets, select the 300-pixel soft brush and disable the shape dynamics that are applied to this default brush.



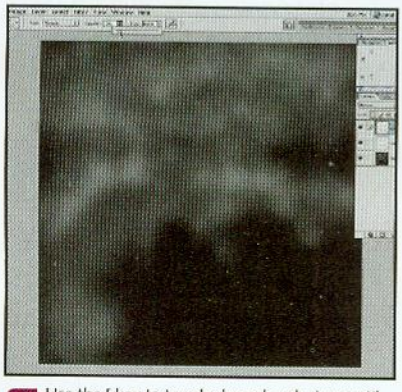
4 Change the master diameter of the brush to 450 pixels and close the Brushes palette. Type 'x' on the keyboard to reverse the foreground and background colours so that white is in the foreground. Set the brush opacity to 20 per cent and start painting on your new layer.



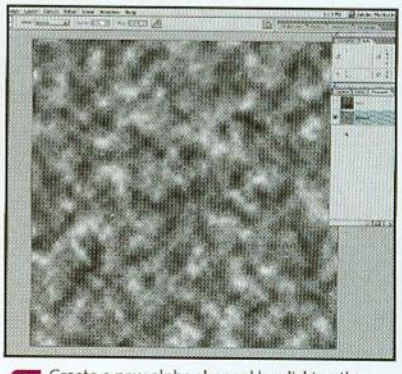
5 Keep painting with this brush until the layer starts to look like this. Paint over some areas more than once to make them lighter than others. Use the] key to increase the brush size to 600 pixels, and decrease the opacity of the brush to 10 per cent. Paint with this brush on the layer to even out the effect.



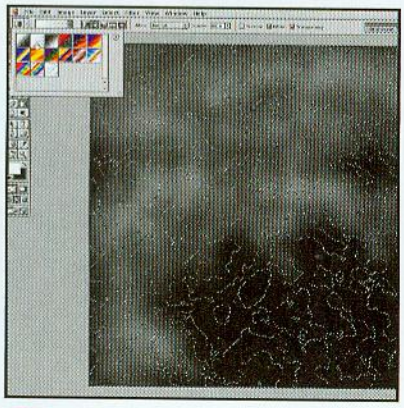
6 This bottom layer will represent some of the lowest altitudes in our terrain. If it's too light, the result will be unrealistic. To be on the safe side, reduce the opacity of the current layer to 82 per cent. Create a new layer on top of the previous one.



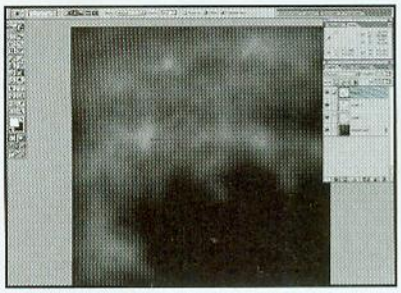
7 Use the [key to toggle down brush sizes until your brush is 250 pixels wide. Use opacities of 20 per cent and 10 per cent, and begin to paint some lighter areas on the new layer. Just paint where you would want the terrain to get higher, and stay away from the edges.



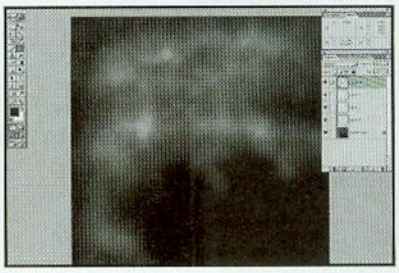
8 Create a new alpha channel by clicking the 'create new channel' button at the bottom of the Channels palette. Now, from the menu choose Filter>Render>Clouds. Command-click (Mac) or Ctrl-click (Windows) your alpha channel icon in the Channels palette to generate a selection from the new channel.



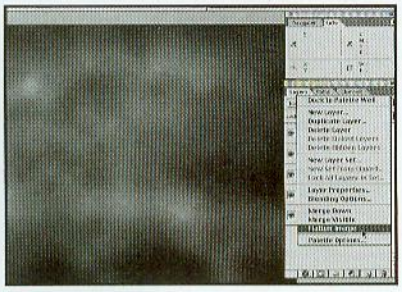
9 Return to the Layers palette and create a new layer on top of the others. Select the Gradient tool (g). Select the radial gradient option in the tool options bar, and choose 'foreground to transparent' from the gradient presets.



10 Hide the selection (Command-h on the Mac or Ctrl-h in Windows). Reduce the gradient opacity to 25 per cent. Begin clicking and dragging to create radial gradients within your cloud-shaped selection. To make the higher areas lighter, go over them more than once.



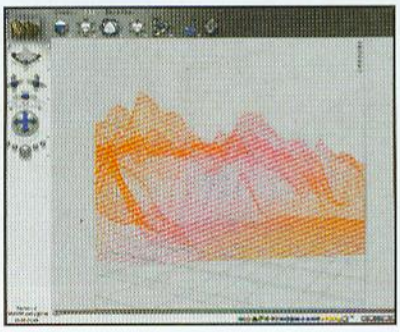
11 Deselect (Command-d on the Mac or Ctrl-d in Windows), and create one more new layer. Select the Brush tool (b), and toggle the foreground/background colours (x) so that black is the foreground colour. Use a large soft-edged brush with a 10 per cent opacity setting to paint on this layer to darken some of the edge areas.



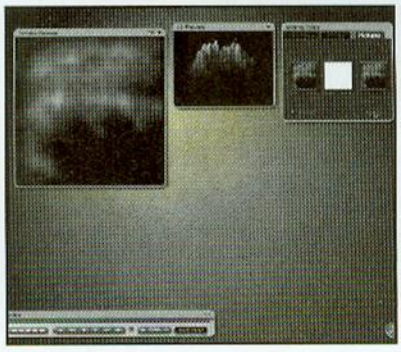
12 Delete the alpha channel by dragging its icon into the trash in the Channels palette. Choose Flatten Image from the Layers palette drop-down menu. Save the file in pict format as terrain1.pct. Keep the resolution set to 8 bits/pixel, and the compression set to none.

Part 2: Bring it into Bryce

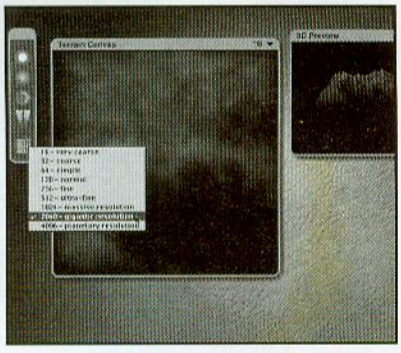
And now to generate a 3D terrain from your greyscale image...



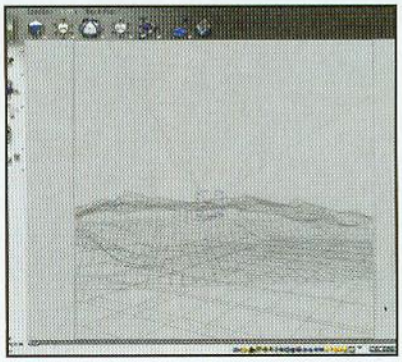
1 Launch *Bryce 5*. Set the document set-up so that the image size is about 750 by 750, or basically a square. Create a water plane, specify a sky, and use the materials editor to apply materials to the water and the terrain. Move the terrain so that it's sitting in the water.



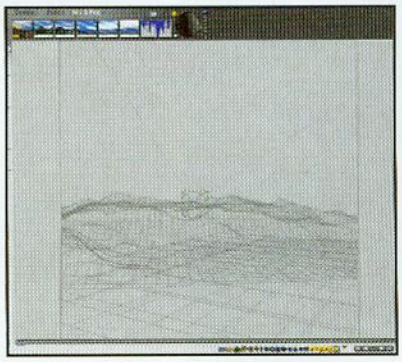
2 Select the terrain, and access the terrain editor. In the pictures section of the editing tools, click on the load button above the left thumbnail. Navigate to your new file terrain1.pict. Drag the blend slider all the way to the left and click Apply.



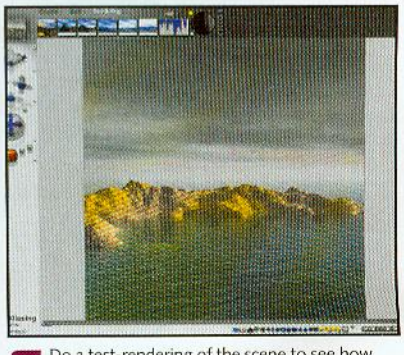
3 In the elevation section of the editing tools, drag the raise/lower slider to the right to darken the image and reduce the height of the terrain. At the left choose a resolution of 2048 so that the terrain is smooth and detailed.



4 Drag the smoothing slider in the editing tools to smooth the terrain a little, and click on the checkmark at the bottom to apply these changes to your terrain. Now, within the scene, move the position of the terrain and rotate it if necessary to position it where you want it.



5 Access the sky and fog section of the interface. Adjust the position of the sun so that it's close to the right and low on the horizon. Keep an eye on the thumbnail rendering at the left to see your changes. We want long shadows from a low light source in the left of the image.



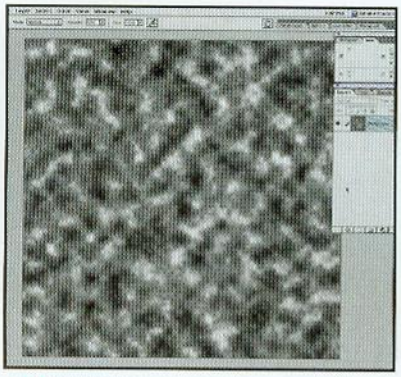
6 Do a test-rendering of the scene to see how things are working out so far. Feel free to make any adjustments to the sky and sun. Also, go ahead and change the materials applied to the terrain or the water if you like. Feel free to get creative with your scene – it doesn't have to match ours exactly. Save the file. ›

Part 3: Adding to the existing scene

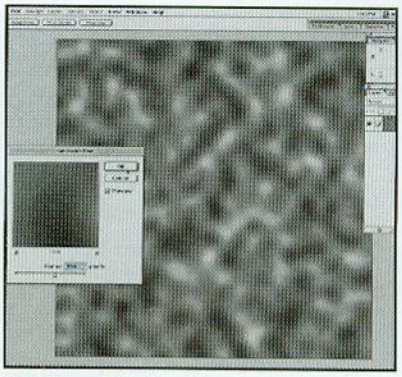
Now use the same techniques to add some land on the horizon and an underwater plateau. You can also cast some butterfly reflections on the water...

Clouds

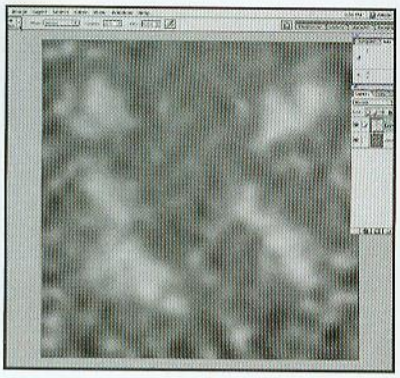
The clouds filter really is something remarkable and useful, although most *Photoshop* users will avoid using it for obvious uses such as direct backgrounds or skies. However, using it in channels as a basis for new selections can add an element of randomness that can enrich images such as greyscale terrains, giving them that feeling of randomness and genuineness. A danger of working digitally is that the result can often be a little too clean or perfect. Something like the clouds filter can help remedy this problem.



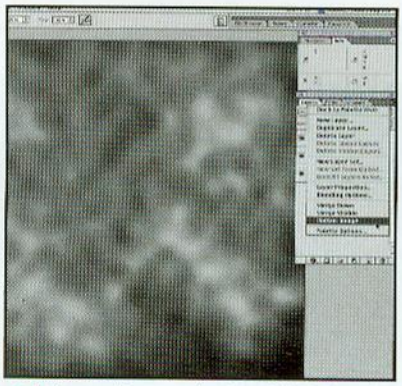
1 In *Photoshop*, create another greyscale file. Make it the same size as the previous one, with a black background. This time, on the background layer (instead of in a new channel) choose Filter>Render>Clouds to apply the cloud filter to the background.



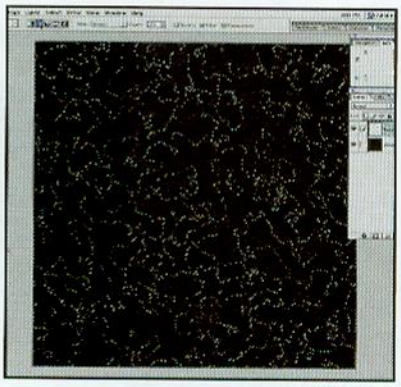
2 Choose Filter>Blur>Gaussian Blur from the menu. Enter a value of 40 pixels, so that the clouds are substantially blurred. Create a new layer and select the Brush tool (b). Choose a large soft brush of about 600 pixels, and sample (option) a greytone from the background.



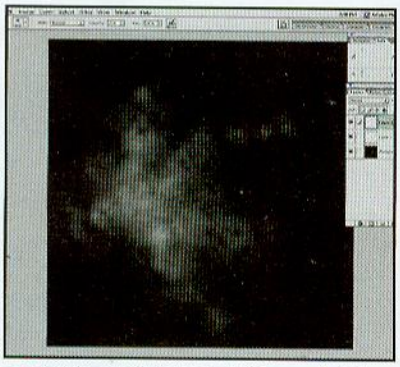
3 Set the brush opacity to 25 per cent and paint on the new layer. Paint over some of the darker areas inside the terrain to lighten them. Use the white background colour (x) and paint in some even lighter areas using a smaller brush of 400 pixels.



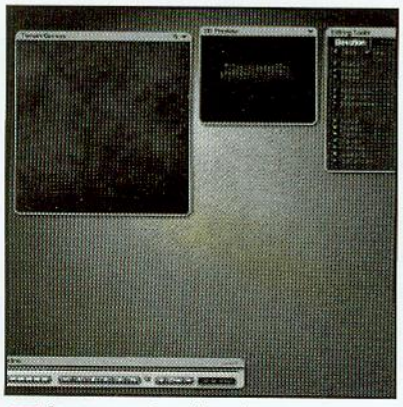
4 Choose a foreground colour of black (d), and create a new layer. Paint in some dark areas using various brush sizes, mainly on the bottom edge, and also some throughout the image. Reduce the opacity of the previous layer to 75 per cent. Flatten the image and save it as terrain2.pct.



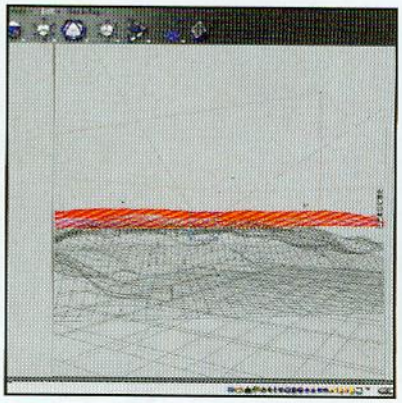
5 Create another greyscale file just like the others. In a new channel, render some clouds and generate a selection from the channel. Create a new layer and choose the Radial Gradient tool with a 'foreground to transparent' setting, and a foreground colour of white.



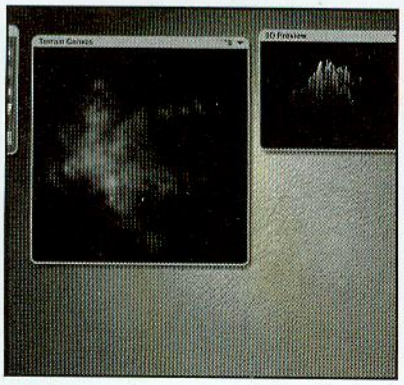
6 Set the gradient opacity to 25 per cent, hide the selection, and create a series of gradients on the layer inside the selection. Deselect (Command-d on the Mac or Ctrl-d in Windows), and create a new layer. Use the Brush tool to paint some lighter areas on top. Flatten the image and save it as terrain3.pct.



7 Reopen your *Bryce* file and create a new terrain. In the terrain editor, load terrain2.pct just like you did with the previous one. Smooth it, lower it a little, and specify the same resolution of 2048. Click on the checkmark to apply the changes.



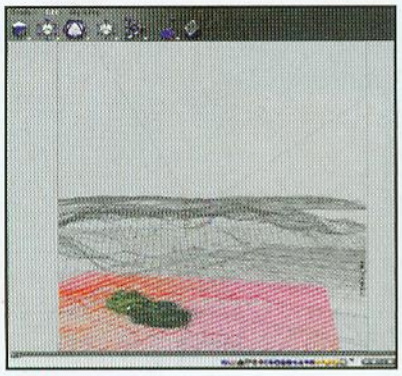
8 Reposition the terrain in the scene so that it's behind the previous one and creates a horizon. Rotate the terrain into place. Sink it into the water by moving it down a little. Use the scale functions to stretch it almost entirely across the background.



9 Create another new terrain. In the editor, load the image terrain3.pct. Again, use the smoothing slider to smooth it, and the raise/lower slider to lower it quite a bit. Specify a resolution of 2048 again and click on the checkmark to apply these changes.

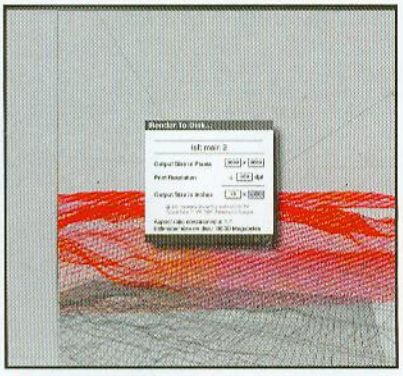
Bryce tips

You'll notice in the tutorial that we use a resolution of 2048 for our terrains. This is mainly because the terrains appear so close in the scene. If we'd used a smaller resolution, there's a greater chance of there being noticeable jagged pixel edges coming across in the terrain. This is also the reason why we used such a large resolution greyscale image in the terrain editor. Using the 'render to disk' feature is a much faster way to render your images in *Bryce*. If you watch the scene render, you have to wait longer for the rendering because it's constantly refreshing the screen. That's why it's a good idea to do a quick test-rendering in your view, and then render the full resolution scene to disk.

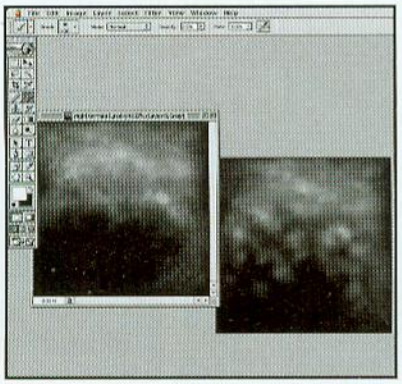


10 Now position the terrain in front of the other two in the scene and off to the left. Move it down to submerge it just below the surface of the water so it looks like an underwater reef. Use the Spray Rendering tool to check whether or not it's submerged.

11 Select File>Render To Disk from the menu. Specify a size and resolution in the resulting dialog so that it fits roughly within one of the arches in your background image. Save it as a tiff and name it left1.tif.



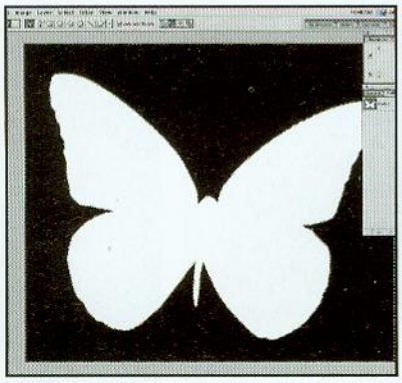
12 Select the middle terrain and the background terrain. Choose Object Mask from the render options. This will render a channel for these objects in the scene. Choose Render To Disk again and specify the same size and resolution settings. Save it as a tiff and name it leftmask.tif. Save the *Bryce* file.



13 Now that you know how, create two more greyscale terrains for another scene. Save them as terrain4.pct and terrain5.pct. Open your *Bryce* scene and pan to the right until the existing terrains are off to the left and out of sight. Create two new terrains and apply the greyscale images to them.

14 Edit the terrains in your scene until you're happy with them. Choose Save As to save this scene under a different name. Render the image to disk at the same specs as the earlier renderings, naming it right1.tif. Now render a mask of the terrains to disk as before, and name it rightmask.tif.

15 Open the file butterfly.pct in *Photoshop*. Use the Pen tool to draw a closed path around the edge of the butterfly. Command-click the path icon in the Paths palette to generate a selection from it. Fill the active selection with white.



16 Invert the selection (Command-Shift-I on the Mac or Ctrl-Shift-I in Windows), and fill the inverted selection with black. Deselect (Command-d or Ctrl-d), and save the file in pict format as butterflymask.pct. Quit *Photoshop*, launch *Bryce* and open the first scene you created.

17 Create a 2D picture object in your scene. Load butterfly.pct as the image and butterflymask.pct as the alpha channel, and click on the checkmark. Position the pict object in your scene to roughly correspond with a butterfly from the background image. Just eyeball it.

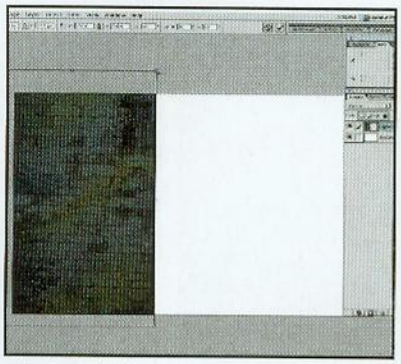
18 Create another one and position it using the same logic. We just want to create some reflected colours in the water for use later. Render a section to test the positions. When you're happy with the positioning, render the image to disk at the same size and resolution as the others, and name it reflections.tif.

Part 4: A basic texture map

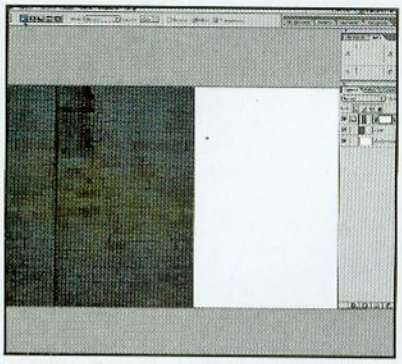
Here's how to create some basic image maps in *Photoshop* so you can make custom textures to apply to a 3D model...

Texture resolution

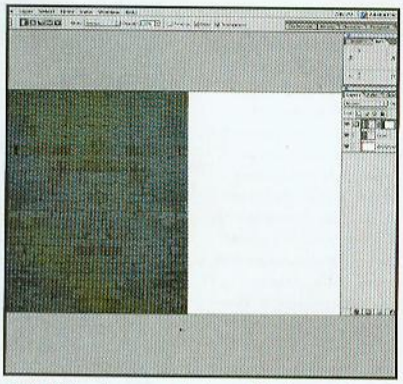
The resolution you work to when creating textures is determined by factors such as available memory, what your 3D app will allow, and the size of your source images. As is always the case, higher resolution is better. A high resolution can help you avoid pixellation or jaggies when you map your textures on an object. There's no need to get too detailed and create massive resolution texture maps for things like our temple models since they're smaller in the background. However, for models like the pot, which appear larger, your texture map resolution should be larger. A little trial and error will help you discover which resolutions are best for which purposes.



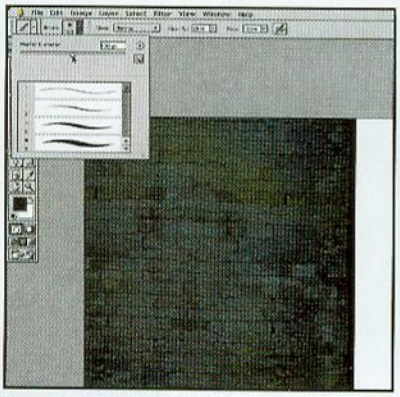
1 Open the file: 1.psd. Select all and copy. Create a new file that's 30cm wide, 18cm high, at a resolution of 72ppi in RGB mode. Paste into your new file. Use Free Transform (Command-t on the Mac or Ctrl-t in Windows) to reduce the size, and position it to the left.



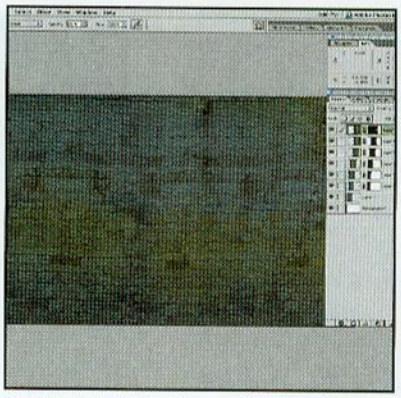
2 Duplicate the layer by dragging its icon onto the 'create new layer' button in the Layers palette. Choose Edit>Transform>Flip Horizontal from the menu, and drag it towards the right using the Move tool. Add a layer mask and select the Gradient tool with a linear gradient setting.



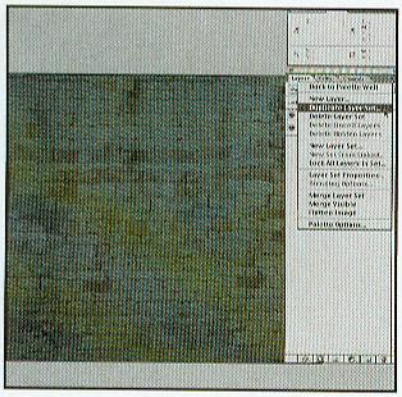
3 With a foreground colour of black, a setting of 'foreground to transparent' and an opacity setting of 100 per cent, drag a linear gradient on the layer mask from left to right. Just make it long enough to soften the hard edge on the left.



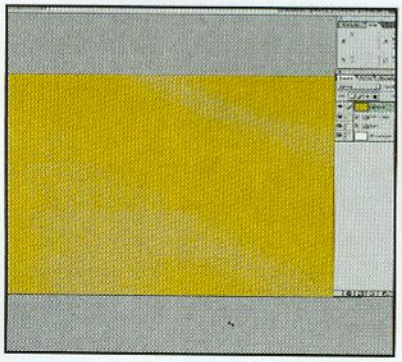
4 Duplicate the current layer and move it over to the right. Choose the Brush tool and specify a soft brush of about 100 pixels in diameter. With a fill colour of black and opacity set to 100 per cent, paint in the layer mask at different points so that things don't look exactly like the previous layer.



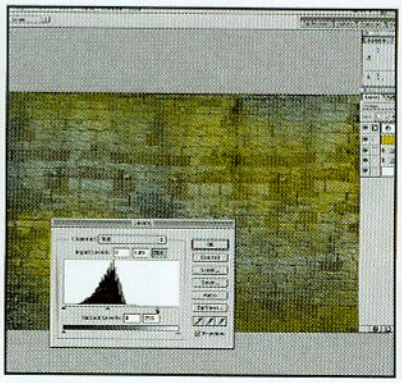
5 Duplicate the top layer and drag it to the right, again using the brush on the mask to make it appear irregular in places. You can see a pattern developing here, can't you? Continue duplicating the top layer and moving to the right, over and over again until you've filled the canvas.



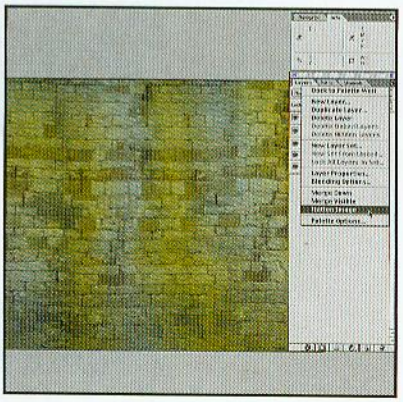
6 Make a layer set by clicking the 'create a new set' button at the bottom of the Layers palette. Drag all the layers into the set, from top to bottom so that they remain in their current order. Choose Duplicate Layer Set from the Layers palette drop-down menu.



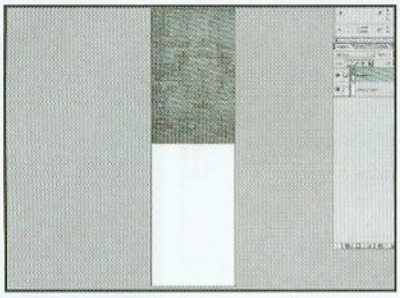
7 Change the blending mode of the duplicate set to Overlay and reduce the opacity to 30 per cent. Click on the foreground colour icon to access the picker. Create a new colour of R:195, G:184, B:108. Then create a new layer and fill it with the foreground colour (Option-delete on the Mac or Alt-delete in Windows).



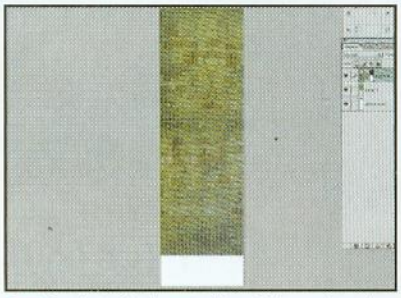
8 Change the layer blending mode to Colour, and reduce the opacity to 28 per cent. Create a new levels adjustment layer by accessing the drop-down menu in the button at the bottom of the palette. Drag the midtone and highlight sliders of the Input Levels to the left to brighten them.



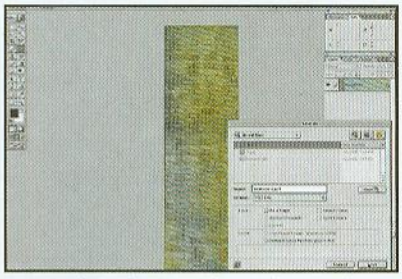
9 Drag the shadow slider of the Output Levels to the right to lighten the dark areas of the underlying layer. Click OK. Choose Flatten Image from the Layers palette drop-down menu, and save the flattened file as a pict. Name it texture 1.pct.



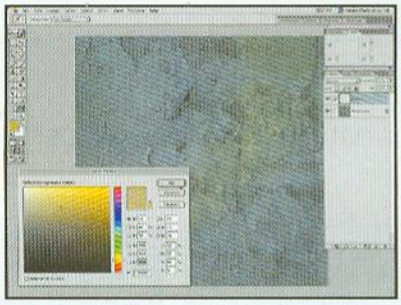
10 Create a new file that's 11cm wide, 38cm high, with a resolution of 72ppi in RGB mode. In your texture 1.pct file, select all and copy. Paste into your new file. Use the Move tool to drag your newly pasted layer to the top of the canvas.



11 Duplicate the layer and drag it lower down the canvas using the Move tool. Add a layer mask, and use the Linear Gradient tool on the mask. Drag it from top to bottom to mask out the hard top edge of this layer.

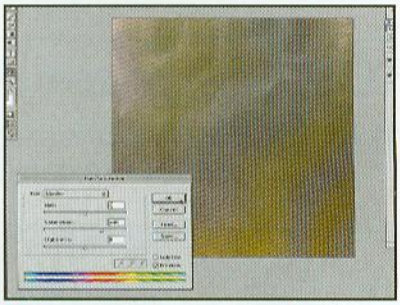


12 Duplicate the current layer and move it down like you did previously. Use the Brush tool on the mask so that it looks a little different from the mask on the previous layer. When you're finished, flatten the layer and save the file in pict format. Name it: texture 2.pct.



13 Open the file: 3.psd. Select the Crop tool (c). Holding down the Shift key, crop around a section in the centre of the image in the shape of a square. Create a new layer, and create a foreground colour of R:195, G:184, B:108. Fill the layer with the foreground colour.

14 Change the blending mode to Colour and reduce the opacity to 35 per cent. Create a new levels adjustment layer and lighten the highlights and midtones in the Input Levels, and the shadows in the Output Levels. Flatten the image and save it as texture 3.pct.



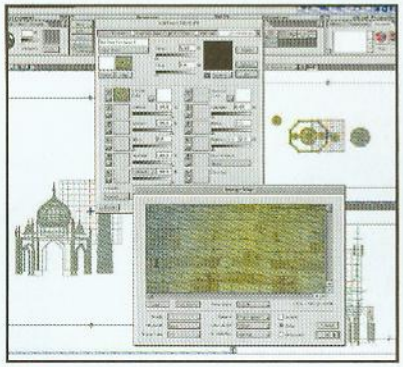
15 Open the file: 4.psd. Hold down the Shift key and use the Crop tool to crop a square section of the aluminum foil photo. Create a new Hue/Saturation adjustment layer. Increase the Saturation by 40 and flatten the image. Save it as texture 4.pct.

Part 5: Mapping the textures

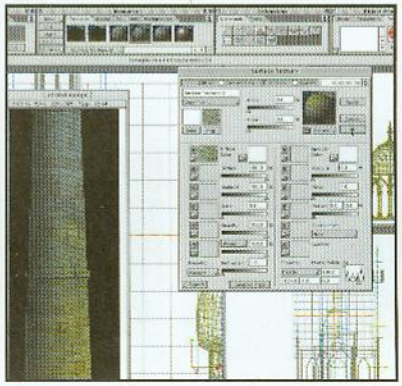
Now we'll show you how the textures you've created can be mapped onto a previously created model in a 3D application. Here's how we did it...

3D apps

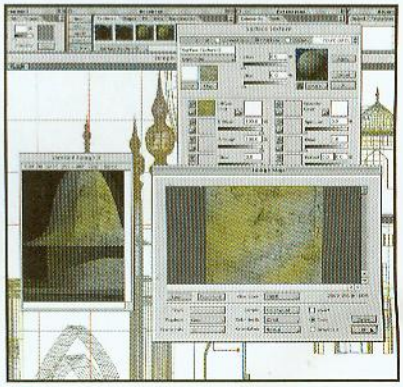
Here, we decided to use *Strata 3D Pro* to show how your *Photoshop* images will translate into 3D textures. We chose *Strata* because of its ease of use, and low price tag. All the files that we've created in *Strata* can be found on the cover CD. If you want to follow along with this part of the tutorial but don't have the app, you can download a demo from [w] www.strata.com. You don't have to use *Strata* though, because almost every 3D app out there enables you to create your own textures and import different images and channels to build them.



1 We opened our previously created model in *Strata 3D Pro* and created a new surface texture. For this texture we imported texture 1.pct as an image map. We applied this surface texture to the larger domes in the image, and specified a spherical map to wrap it around.



2 The same texture was applied to the temple archways as well. We created a second new texture and imported texture2.pct as an image map. This tall thin texture was mapped onto the towers. A cylindrical mapping was used to wrap it around.

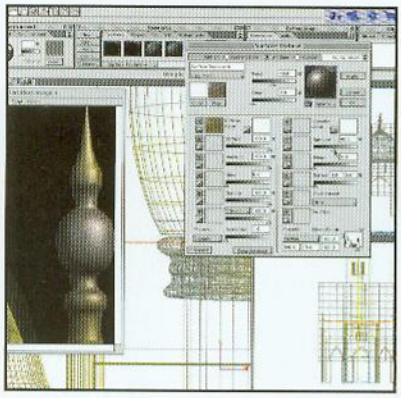


3 A third texture was created. This time we imported texture 3.pct as an image map. This texture was applied to areas like the smaller turrets, floors, and the tall posts. It was mapped cylindrically to the posts and turrets and flat on the floors.

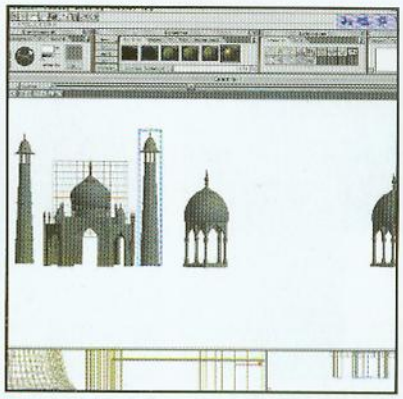
Mapping the textures continued...

Simplicity

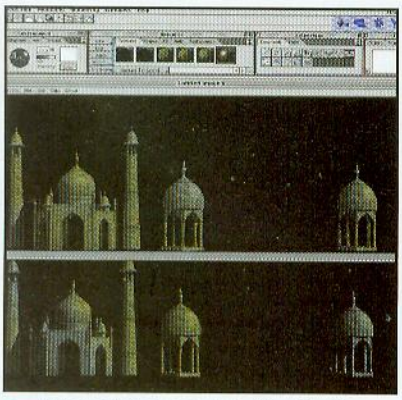
Because our temple model is so small in the image, we can cut corners when building the textures. There's no need for bump maps. There's also no need for reflection or environment maps since the texture is supposed to look like stone. We really don't need much other than a few good image maps to make this model look right. The lighting is quite simple too; we used a single light source from the right to match the lighting in the 3D *Bryce* scene.



4 We created a fourth and final texture for use in this model. This time we imported texture 4.pct as an image map. This texture was applied to the top details of the domes and the posts. Since we wanted it to look shinier than the stone textures, we increased the specularity of this one.



5 Once the textures were applied to the models, we created a camera and spaced out the buildings roughly in the position we wanted them to appear on our *Bryce* horizon. We didn't have to be too fussy about it since it was all going to be combined later on in *Photoshop*.



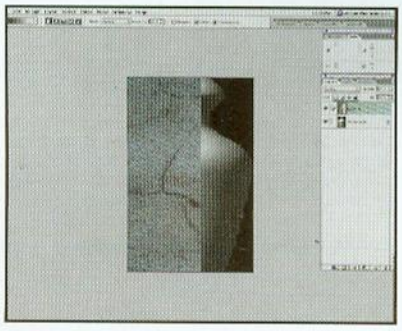
6 We created two separate lighting situations, one with dark shadows and one with hardly any shadows at all. We rendered each one at full resolution so that we can combine them in *Photoshop* if we want to. They were named render1.pct and render2.pct.

Part 6: A more detailed texture

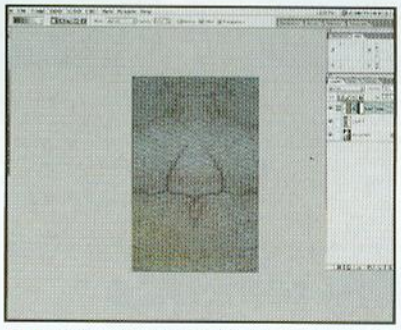
In this part, we take the image map texture a little further by creating different greyscale images for the same texture to use on our 3D model...

Black and white

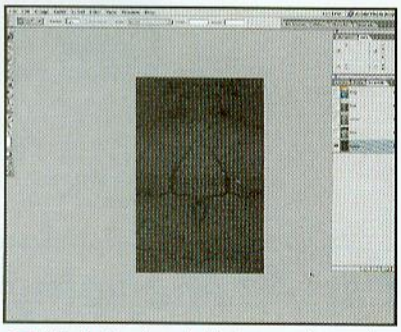
When importing greyscale images into various texture channels like Specularity, Reflection and Diffusion, it's good to keep in mind that the logic at work here is the same as that of *Photoshop*'s alpha channels. White areas are areas of visibility and black areas are masked. All greyscale values in-between are variations of visibility between black and white. When it comes to using greyscale images for bump maps, the one thing to remember is that white is high, and black is low. Again, all the greyscale values in-between will fall into place.



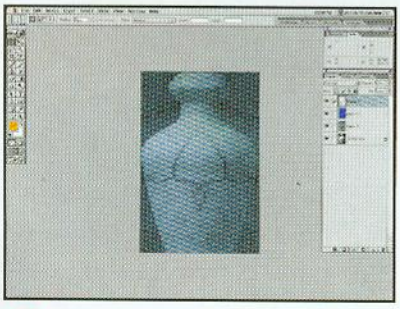
1 Open the file: template.pct. You can use this as a template for creating an accurate surface texture for this model. Open the file cement.pct. Select all, and copy. Paste into the file template.pct. Drag it to the left edge of the canvas using the Move tool.



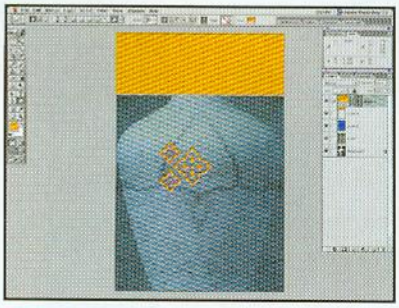
2 Duplicate the layer and flip it horizontally. Drag it to the right edge. Create a layer mask and select the Gradient tool. Use a foreground colour of black, a setting of 'foreground to transparent', and a linear method. Create a gradient to soften the area in the centre where they overlap.



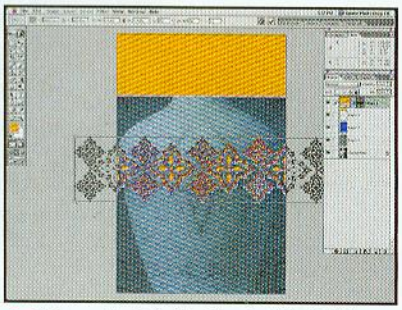
3 Link the two layers in the Layers palette and merge them (Command-e on the Mac or Ctrl-e in Windows). Copy the layer, create a new channel named 'bump', and paste into the channel. Use Levels to adjust the tones in the channel to make it much darker.



4 Create a new layer with a Colour blending mode, fill it with a blue foreground colour and reduce the opacity to 25 per cent. Reduce the opacity of the cement layer so you can see the pot. Create a new layer and draw a rectangular marquee across the top of the pot.



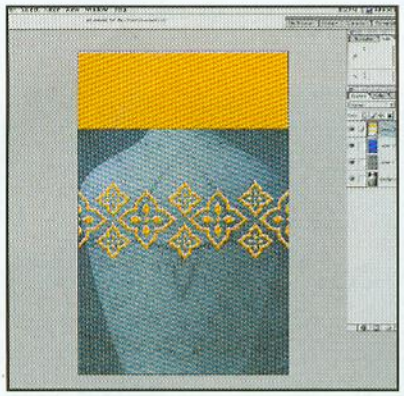
5 Fill the marquee with a gold colour. Choose the Custom Shape tool. Then, in the custom shape picker, choose Load Shapes from the drop-down menu. Load the shape 'pattern.csh' from the CD. Hold down the Shift key and click and drag with the Custom Shape tool.



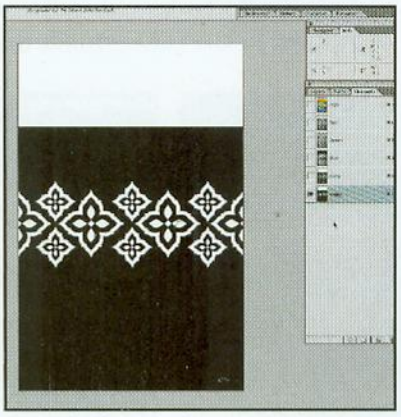
6 Choose the Path Selection tool (a). Hold down the Option and Shift keys and click and drag on the shape to create a duplicate beside the original. Repeat this step until you have a full row of shapes. Select all the shapes and scale them using Free Transform.

Templates

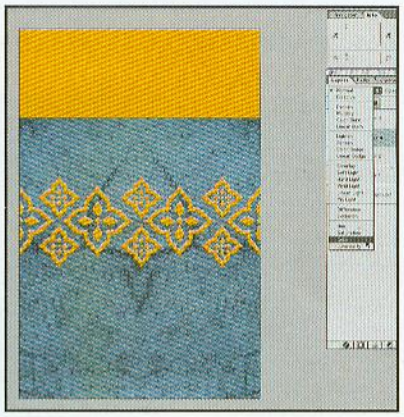
When you've got a pre-existing 3D model that you want to create a texture for, like our 3D pot, it's always helpful to do a low-resolution rendering of that model in orthographic view. Then you can bring the rendering into *Photoshop* and use it as a template for your texture. This helps you to place elements of your texture in the correct position and enables you to create your texture to the correct aspect ratio with ease.



7 Scale them until the shapes on the left and right edges would match up if tiled. Link the shape layer and the layer with the gold rectangle, and merge them (Command-e on the Mac or Ctrl-e in Windows). Command-click (Mac) or Ctrl-click (Windows) the layer icon to generate a selection from it.

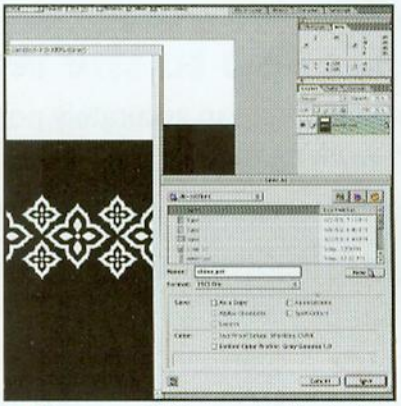


8 In the Channels palette, go to the bump channel you created previously and fill the selection with white. Keep the selection active and create another new channel; name it 'shine'. Fill the active selection in this channel with white as well. Deselect.

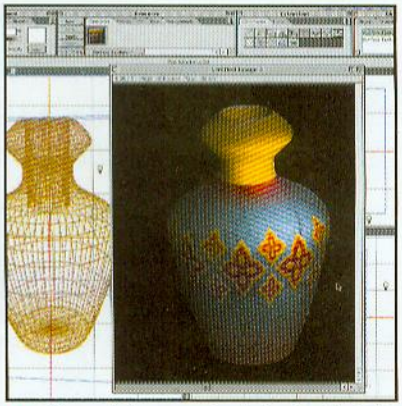


9 Return the opacity of your first layer to 100 per cent. On the top layer, use the Magic Wand to select an empty area inside a shape. Hold down the Shift key and select all of the empty areas inside the shapes. Create a new layer underneath this one with the blending mode set to Colour.

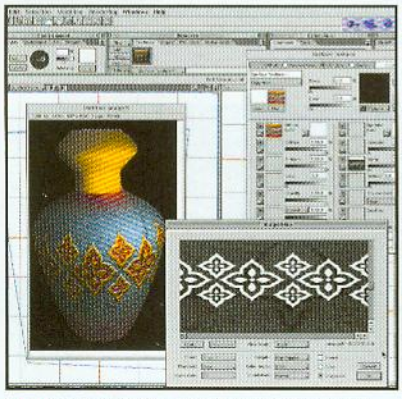
10 Fill the selection with a foreground colour of red and deselect. Use the Linear Gradient tool to draw a gradient on the top and bottom of this layer. Duplicate the layer, change the mode to Multiply and reduce the opacity to 25 per cent. Flatten the image.



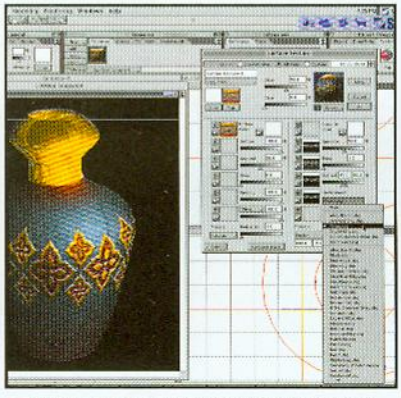
11 Save a copy of this image and call it pot.pct. In the bump channel, select all and copy. Create a new greyscale file the same size and paste. Flatten this image and save it as bump.pct. Do this same procedure to create a greyscale file from the shine channel.



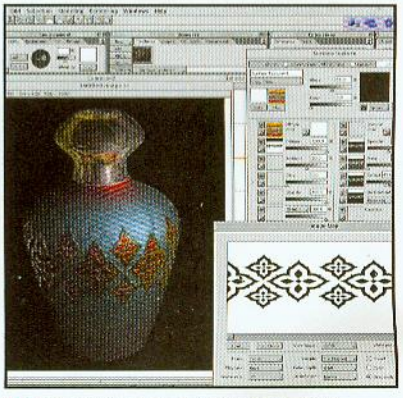
12 We created a new surface texture in *Strata 3D* for our 3D file. We used the pot.pct file as an image map and wrapped it around the pot a few times using a cylindrical mapping method. Because we paid attention to the edges in *Photoshop*, it appears seamless.



13 Bump.pct was imported into the bump map channel of the new surface texture. Here you can see how the white areas in the texture are obviously the highest points on the surface. Also, the subtle cracks and bumps can appear quite prominent.



14 Shine.pct was imported into the new texture and used as a map for the specular, environment, and reflection channels of this texture. We simply used a room interior, supplied with the application, as the environment which is reflected in the shiny areas.



15 We imported shine.pct into the diffuse channel. We inverted the texture channel so that all of the metallic areas were masked out in the diffuse channel. We rendered the file after carefully adjusting the light and camera angle and saved the rendering as pot.tif.

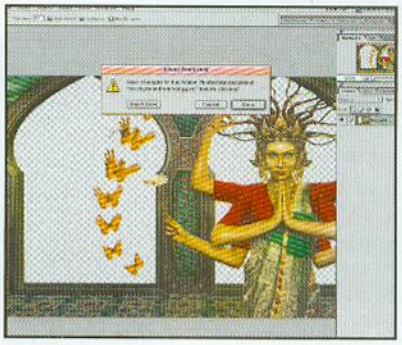
Part 7: The snapshot

By creating a reduced resolution flattened version of the background, we've now got a background image to use as a template in our 3D application...

Why 72ppi?

When bringing a file into a 3D application to use as a background image, its main function is to help with the positioning of objects and with the arrangement of lights. The background image basically acts as a template. It won't appear as part of your final rendered image. As a result, you simply don't need to use a file with print resolution. We used a screen resolution of 72ppi, because anything larger is unnecessary and can consume valuable memory allocated to your 3D app, which could be more wisely used for other things like modelling.

1 Open the background working file that you completed in Section Two. From the sub-menu in the History palette choose New Snapshot, then select Merged Layers from the drop-down menu in the resulting dialog box. Select the new snapshot that appears in the History palette.



2 Click on the 'create new document from current state' button at the bottom of the Layers palette. The snapshot will open in a new window. Go back to your background file and close it. Don't save the changes, because you don't want it to be in a merged state.

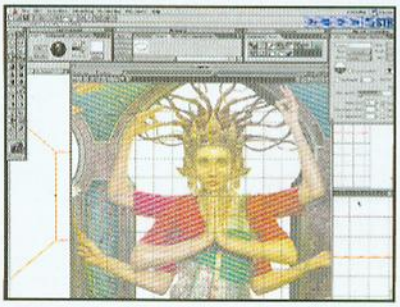
3 Use the Crop tool (c) to crop out all sections of the snapshot except for the woman's arms. Choose Image>Mode>RGB from the menu. Choose Layer>Flatten Image from the menu. Choose Image>Image Size from the menu and reduce the resolution to 72ppi. Save the image in pict format as: bkd.pct.

Part 8: From the 3D app to the working file

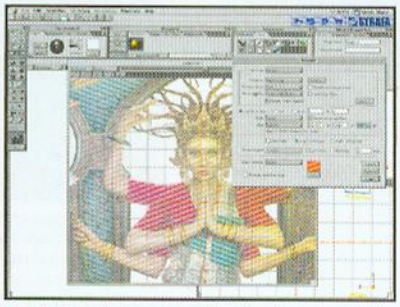
By using the snapshot as a template, you can accurately position your 3D models and integrate the finished rendering into your *Photoshop* working file...

Reflection

Many 3D applications allow you to import an image as a reflection map. Some applications enable you to have an environmental reflections map and another one for each texture. If you're going to use highly reflective surface textures on your object, why not import the *Photoshop* file that you'll be putting the finished renderings back into as your reflections map. Using the actual file for a basis of reflection can help in making different elements from different applications look like they belong together.

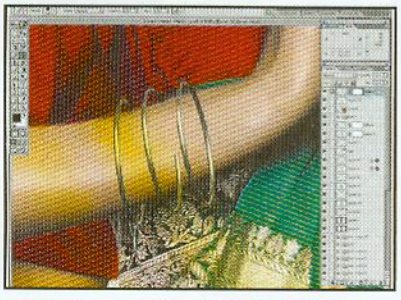


1 In Part 5 we created a new camera window. Import the bkd.pct file as a background into the camera window. Reduce the opacity of the background image to 50 per cent. This makes it less confusing and easier to see your 3D models when working in the camera window.

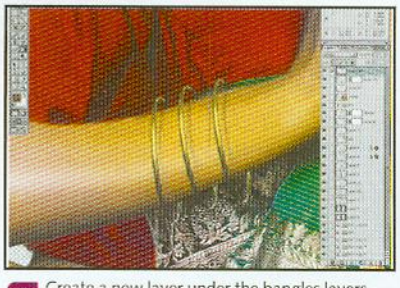


2 We created a series of bangles to go around her wrists, using the background image as a guide to size and positioning, as well as lighting. The image was rendered at full resolution with an alpha channel to select the models and saved as: bangles.pct.

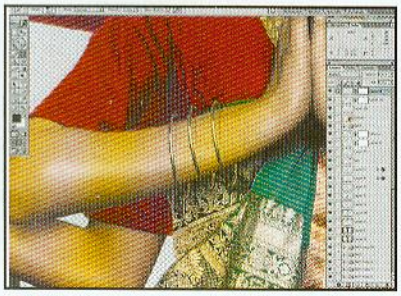
3 Open the working background file and the bangles.pct file in *Photoshop*. Generate a selection from the alpha channel and drag the contents of the selection into your new file. Position this layer at the top of the hierarchy. Use Free Transform if you need to resize, and position the bangles.



4 Add a layer mask. Select the Brush tool (b), and use a hard-edged brush with a black fill colour and an opacity of 100 per cent. Use the Brush tool to paint over areas of the bangles on the mask that should be behind her arm. Duplicate the layer and change the mode to Soft Light.



5 Create a new layer under the bangles layers with a Multiply mode. Use the Pen tool to draw closed paths where shadows would occur from the bangles on the arms. Generate a selection from the path and use a radial gradient of 'dark colour to transparent' to introduce shadows within the selections.



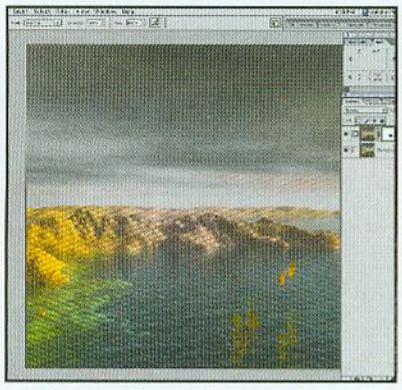
6 Deselect, and choose Filter>Blur>Gaussian Blur from the menu and enter a low value in the dialog box. Add a layer mask. Use a hard brush with a black fill and an opacity of 100 per cent on the mask to remove any shadows that expand beyond the arms onto other areas of the image. ca•p

Part 1: Adding the background scene

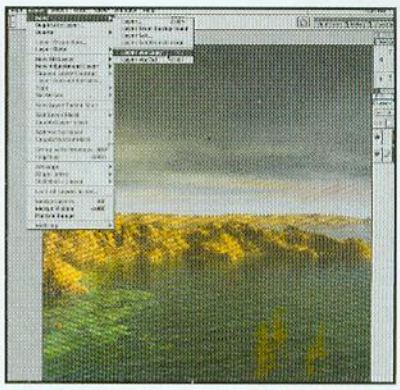
A sense of completeness is achieved by adding in the background scenery that was previously rendered in *Bryce*. And now our hovering butterflies are reunited with their reflections...

Contrast

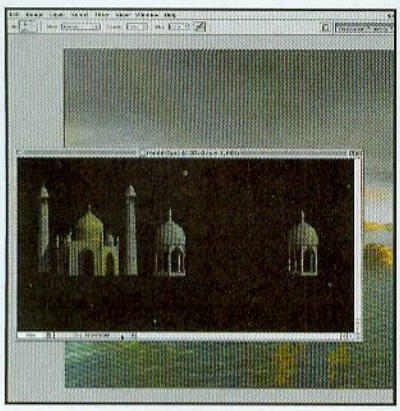
There's nothing like contrast to attract the viewer's attention to a certain part of the image. We deliberately increased the contrast behind the woman's head by adding in the white misty glow against the darker sky. As a result, the viewer's eye is drawn toward this area. Two more carefully placed areas of contrast are the white flowers. They're laid out in a way so that the viewer's eye is carried throughout the image rather than resting solely on the woman's head area. When placing areas of contrast in your image, keep in mind the fundamental design rules regarding composition. Things can easily get too busy and chaotic.



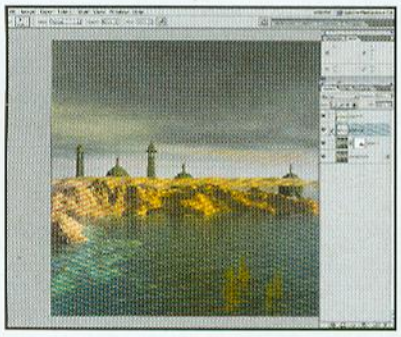
1 Open your *Bryce* rendering if you've done one. Alternatively, open the file reflections.tif from the Section 5 folder on our cover CD. Select all, and copy. Also open left1.tif, and paste. Add a layer mask to your new layer and use a large soft brush with a black foreground colour to paint over the butterflies to mask them, leaving only the reflections.



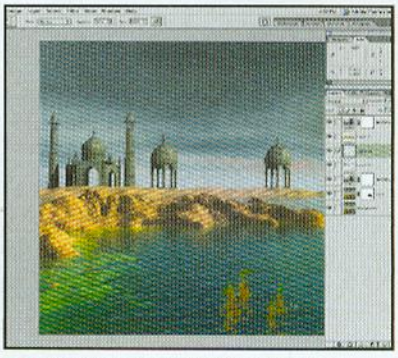
2 Open the rendering: leftmask.tif, select all and copy. Back in the file left1.tif, create a new alpha channel and paste. Command-click (Mac) or Ctrl-click (Windows) the channel icon to generate a selection from it. Select your background layer in the Layers palette and choose Layer>New>Layer Via Copy from the menu.



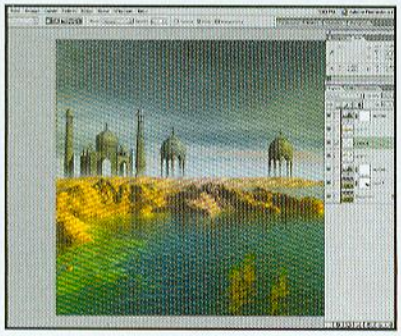
3 Move this layer to the top of the hierarchy in the Layers palette. Select Image>Adjustments> Levels from the menu. Darken the shadows and brighten the highlights a little on this top layer. Open the rendered file: render1.pct, select all and copy. Open the file render2.pct and paste.



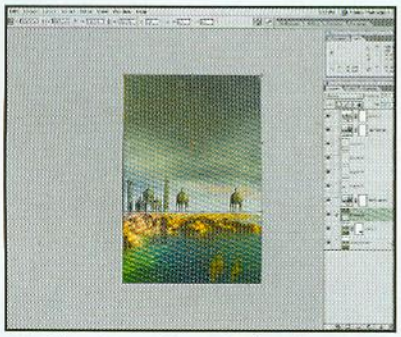
4 Reduce the layer opacity to 35 per cent and choose Layer>Flatten Image from the menu. Command-click (Mac) or Ctrl-click (Windows) the alpha channel icon in the Paths palette to generate a selection from it, and copy. Return to the file: left1.tif, and paste. Move the new layer under the top layer in the Layers palette.



5 Position the temples so that they look as if they're sitting on the horizon. Create a new Hue/Saturation adjustment layer underneath this one in the Layers palette. Increase the Saturation by 38. Create a new layer just above the temples layer in the Layers palette.

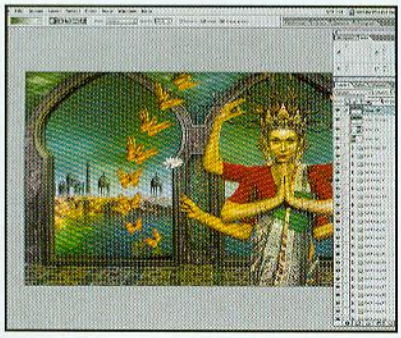


6 Draw a rectangular marquee around the entire sky area on this layer. Select the Linear Gradient tool, set to 'foreground to transparent' and sample the lightest colour at the bottom of the sky. Set the opacity to 70 per cent and draw a small gradient upwards from the bottom of your selection to halfway up the temple doors.



7 Choose Image>Canvas Size from the menu. Anchor it to the bottom centre and add about 50 per cent more canvas to the top of the image. Draw a rectangular marquee around the sky on the reflections layer and create a new layer via copy (Command-j on the Mac or Ctrl-j in Windows). Use Free Transform to vertically scale this new layer to cover the top of the canvas.

8 Choose Layer>Flatten Image from the menu, select all and copy. Paste into your main working file and use Free Transform to adjust the size and reposition. Open your finished renderings right1.tif and rightmask.tif and use the same procedure to create and place the right scene in behind the right archway.



9 Create a new layer with a Colour blending mode. Use the Linear Gradient tool with a 'foreground to transparent' setting and an opacity setting of 100 per cent to draw a gradient from the top of the temples down almost to their bases using a colour sampled from the painted area. Duplicate the layer, change the mode to multiply and reduce the opacity to 35 per cent.

Part 2: Creating clouds and mist

By using custom alpha channels, you can create the illusion of mist floating behind the model's head, and clouds merging the painted areas with the background sky...

1 Set your colours to the default black and white (d). Create a new alpha channel and choose Filter>Render>Clouds from the menu to fill your channel with a random cloud pattern. Generate a selection from the channel and create a new layer, position your new layer just under your hair layer in the Layers palette.

2 Select the Radial Gradient tool with a setting of 'foreground to transparent', opacity set to 100 per cent, and a white foreground colour. Create a few radial gradients inside the selection just behind her head on the new layer. Deselect, and then create a couple of smaller ones behind her neck.

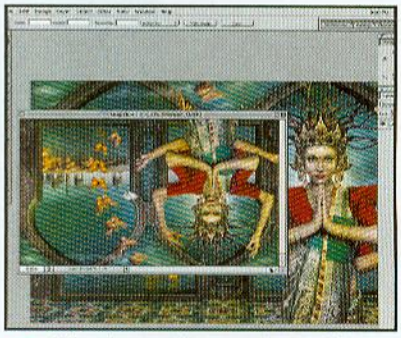
3 Open the file clouds.tif, select all and copy. In your working file, create a new alpha channel and paste. Generate a selection from the new channel and create a new layer at the top of the layer hierarchy. Fill the active selection with white and deselect. Use Free Transform to resize and position the clouds at the top of the image.

Part 3: Making the floor tiles reflective

Use merged snapshots and adjustment layers to add a reflective quality to the floor tiles...

1 Select your top set of floor tile shapes in the Layers palette. Draw a rectangular marquee to cover the tiled area only and create a new levels adjustment layer. Using the Input Levels for all channels, darken the shadows and brighten the highlights. Command-click (Mac) or Ctrl-click (Windows) the adjustment layer mask icon to generate a selection from it.

2 Create a new selective colour adjustment layer. In the neutrals section remove about 10 per cent from the cyan, magenta and yellow sliders. Remove about 2 per cent from the black slider. From the History palette sub-menu choose New Snapshot. Select Merged Layers in the resulting dialog box.



3 Click on the snapshot icon in the top of the History palette. Click on the 'new document from current state' button to open a new window with the snapshot in it. Use the Crop tool in the new window to crop out the floor only. Then choose Edit>Rotate Canvas>Flip Canvas Vertical from the menu.

4 Select all and copy. In the History palette in your working file, choose the last state at the bottom of your palette to revert from the merged state and paste. Use the Move tool to drag the new layer contents down until the bottoms of the archways meet like a proper reflection.

5 Change the mode to Overlay and reduce the opacity to 50 per cent. Duplicate the layer, change the mode to Luminosity and the opacity to 30 per cent. Duplicate this layer and change the mode to Colour. Duplicate this layer and change the mode to Multiply and reduce the opacity to 10 per cent. Create a new set and add all the reflection layers to it.

6 Use the Pen tool to draw closed paths around the bottom sections of the wall panels, excluding the trim. Generate a selection from them. Create a new layer with a Multiply blending mode above the arches in the Layers palette. Use a large soft brush with a black foreground colour to paint dark areas on the bottom of the walls. Deselect.

Mouse-free Photoshop

Save time by cutting down on clicks. We show you how to reduce your reliance on the mouse with a series of tips, keyboard shortcuts and hidden tricks. Do most of the things your mouse can do with less of the mileage...

In this hectic, hurried world, time is at a premium. What if you could get some of it back? What if you could reclaim all the mounting minutes and hours you spend clicking around interfaces searching for functions and features? Now you can – because we've gathered together a set of tips and tricks that'll reduce the number of clicks you need to navigate through *Photoshop* to almost zero. Our aim is to make you a mouse-free *Photoshop* user. While this isn't entirely realistic, we can help you cut down the clicks so much that you'll wonder how you managed before we gave you this advice.

Some of our tips are about hidden shortcuts that are quicker than clicking, others take a little more time to set up, but once configured they'll reduce your reliance on the rodent. To top it all off, we advise you how to get the best from your graphics tablet – a truly mouse-free option.

Note: When listing keyboard shortcuts, we've given the Windows version first and the Mac version second. For example: Ctrl C or Command C = Copy

Expertise provided by Karl Hodge. If you'd like to contact Karl, you can email him at **[e]** khodge@spodgod.com.

KEYBOARD MODIFIERS

Altered states

Using the list of tool shortcuts we've supplied on page 73, you can access any tool in *Photoshop* with a single letter. When a tool has multiple states, like the Marquee tool, you can cycle through those states by holding down the Shift key as you press the corresponding letter on the keyboard.

Instant options

To go to the Options Bar for a selected tool, press Enter. While the bar is selected, you can use the Tab key to move from one option box to another. Press Enter again to apply options and take the focus off the bar.

Colour shift

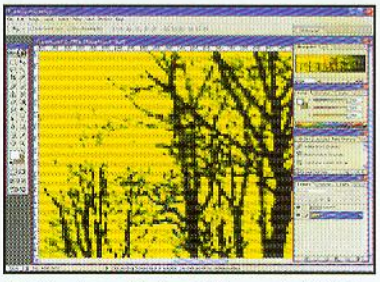
With any painting tool selected, you can temporarily switch to the Eyedropper by holding down the Alt or Option key. Hold down the Shift key as well and the Eyedropper changes to the Colour Sampler tool – used in making colour adjustments.

Move on

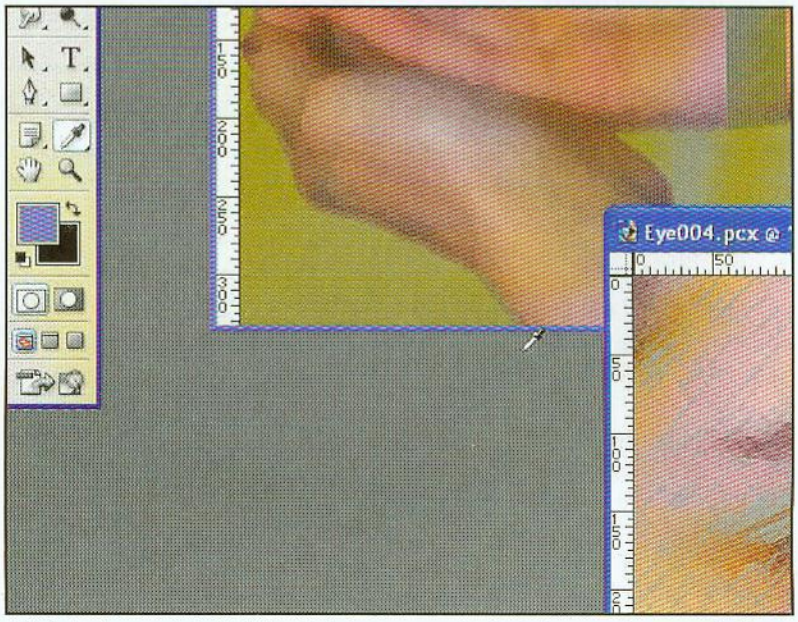
With the majority of tools, holding down the Ctrl or Command key will switch to the Move tool. The exceptions are the Hand tool, which changes to the Zoom tool; the Shape tool, which changes to Path Selection tool; the Slice tool, which changes to the Slice Select tool; and the Pen tool, which requires a tip all of its own...

Direct selection

Holding down the Ctrl or Command key while using the Pen tool switches to the Direct Selection tool. Holding down Alt or Option changes the cursor to the Convert Point tool. When the Direct Selection tool is active, holding down Alt Ctrl or Option Command switches to the Convert Point tool. >



Quickly set magnification to 100 per cent with Ctrl Alt 0 or Command Option 0, or use Ctrl or Command with + or – to zoom in or out in set increments.



With the Eyedropper selected, hold down the button on your pen to select colours anywhere on your desktop.

Keyboard zoom

Bypass the Zoom tool altogether... Ctrl or Command and 0 fits the current image in the Window. Ctrl Alt 0 or Command Option and 0 sets magnification at 100 per cent. Enter any percentage into the Navigator palette, hold the Shift key and press Enter. The zoom percentage box remains active allowing you to enter another percentage.

LAYER SHORTCUTS

New layers please

Create a new layer in an active document by hitting Ctrl Alt or Command Option and N. If you want to skip the dialog box, hold down Shift as well. Ctrl or Command and J makes a copy of the current active layer, while Ctrl Alt or Command Option and J cuts the content of the current layer and places it in a new layer. Ctrl Shift and E or Command Shift and E merges all currently visible layers.

Opacity capacity

When a standard selection tool is active, you can set the opacity of a selected layer by hitting a single number on your keyboard. 1 equals 10 per cent, 2 equals 20 per cent and so on until 0, which is equal to 100 per cent. You can be more exact by typing in the full percentage – 45 equals 45%, for example.

Nice nudge

Click V to activate the Move tool, then Ctrl or Command and an arrow key to nudge a layer by 1 pixel in the direction of the arrow when nothing else is selected. Hold down Shift at the same time to nudge the layer 10 pixels at a time.

Smooth blend

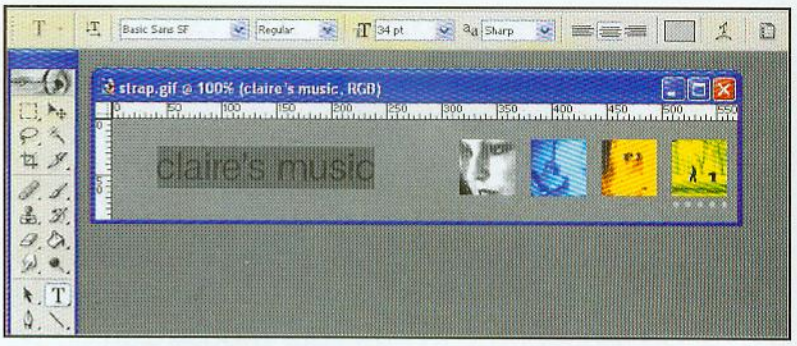
The Layers palette features a series of different blending modes that can be selected from a menu. You can get to these more quickly using the keyboard. Press Alt Shift or Option Shift then the letter that corresponds with the blending mode. Refer to the illustration on the left for a full list.

Layer cycle

Cycle quickly through active Layers using Alt and] or Option and]. Using the [key instead cycles back the other way. Pressing Ctrl Shift and] or Command Shift and] brings the current active layer to the top.

Quick blending modes

N	Normal
I	Dissolve
K	Darken
M	Multiply
B	Color Burn
A	Linear Burn
G	Lighten
S	Screen
D	Color Dodge
W	Linear Dodge
O	Overlay
F	Soft Light
H	Hard Light
V	Vivid Light
J	Linear Light
Z	Pin Light
E	Difference
X	Exclusion
U	Hue
T	Saturation
C	Color
V	Luminosity



Use the keyboard shortcut Ctrl Shift or Command Shift with > or < to increase and decrease the size of text.

TEXT EDITING

Font selector

To quickly cycle through the available fonts on your system while the Text tool is active (before you insert the cursor in your document), press return and then use the up and down arrows on your keyboard. The Font Family field has an autocomplete feature, so once the field is active, you could also type the first couple of letters of a font name to find it quickly.

Format fixes

With the Text tool active, pressing Shift Ctrl or Shift Command with L, C or R aligns your text to the left, centre or right. Other modifiers allow you to alter the style of your text. Shift Ctrl and U, or Shift Command and U, toggles underlining on or off. The forward slash (/) toggles Strikethrough, H switches on Small Caps and K forces your text into uppercase.

Basic keyboard shortcuts

These are the shortcuts everyone should know – many apply to applications other than *Photoshop*...

Ctrl A or Command A = Select All
Ctrl T or Command T = Free Transform
Ctrl C or Command C = Copy
Ctrl X or command X = Cut
Ctrl V or Command V = Paste
Ctrl Shift V or Command Shift V = Paste into Selection
Ctrl D or Command D = Deselect
Ctrl Z or Command Z = Undo
Ctrl O or Command O = Open
Ctrl N or Command N = New Document
Ctrl S or Command S = Save
Ctrl Alt S or Command Option S = Save As
Ctrl P or Command P = Print

Ctrl + or Command + = Zoom In
Ctrl – or Command – = Zoom Out
Ctrl R or Command R = Show/Hide Rulers
Alt F or Option F = File Menu
Alt E or Option E = Edit Menu
Alt I or Option I = Image Menu
Alt L or Option L = Layer Menu
Alt S or Option S = Select Menu
Alt T or Option T = Filter Menu
Alt V or Option V = View Menu
Alt W or Option W = Window Menu
Alt H or Option H = Help Menu

Text selection
With the cursor active within a field of text, you can select elements using the keyboard. Hold down the Shift key and use the left and right arrows to select text one character at a time. Shift with Up or Down will select the entire line or paragraph. Use Ctrl or Command as a modifier to enable you to select individual words.

Size matters
Hold down Ctrl Shift and > or Command Shift and > to increase the size of selected text. Use < instead of > to decrease the text size. The text will increase or decrease by two pixel points at a time. Hold down Alt or Option at the same time and the type size will increase or decrease by 10pts.

Good character
When in Type mode, press Ctrl and T or Command and T to open the Character/Paragraph palette. You don't have to select the text in a currently active layer to change its attributes if you use the Character palette rather than the Options bar.

SETTINGS AND EXTRAS

Full on
Photoshop has two different fullscreen modes. Hit F to clear the window around your image, and hit F again to get rid of the menu bar. Finally, press the Tab key to clear all visible panels. Hitting Shift F in fullscreen mode toggles the menubar on and off.

Preferred settings
You can call up the Preferences panel by hitting Ctrl K or Command K. To cycle through the dialogs, hit Ctrl or Command followed by a number. 1 takes you to the General page, and 2 takes you to Display And Cursors, and so on.

Photoshop's **fullscreen mode enables you to work with images without the distraction of menus or window decoration...**

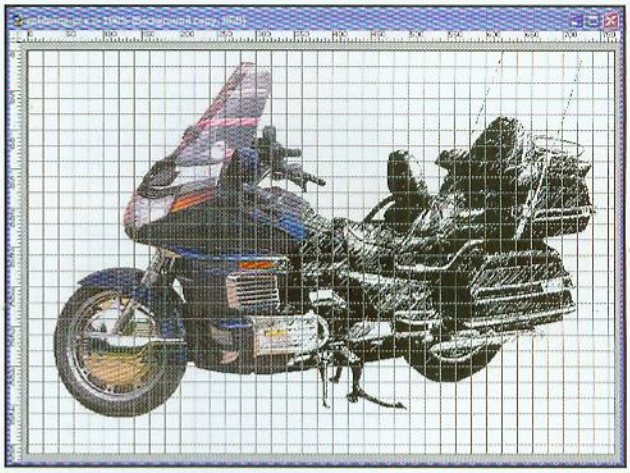
Quick fill
Fill the current selection with the background colour using Ctrl Backspace or Command Backspace. Using Alt Backspace or Option Backspace fills the selection with the foreground colour. Hold down the Shift key with either combination to preserve fill transparency.

Lavish extras
Extras are those parts of the interface used for positioning elements. You can configure which parts are on display by default. Use Alt V or Option V to open the View menu and select Show>Show Extras Options. Set them up the way you like, then use Ctrl H or Command H to toggle all selected extras on or off.

Image navigation
When you're working with large images, you can use key combinations to move around them without using the scrollbar. Use Home or End to go to the top left or bottom right of an image, PgUp and PgDwn to move up and down one screen at a time. Hold down Ctrl or Command while using PgUp and PgDwn to move left and right.

WORKING WITH ACTIONS

Snap back
If you run an Action and it doesn't turn out how you'd like, the History palette can rescue you. Before applying an Action, go to the History panel and click the Snapshot button. Hit F9 to quickly make the Actions palette active and run your Action. If you don't like it, switch back to the History palette and select the snapshot.



You can toggle grids, guides and rulers on and off in one go by using the Ctrl H or Command H keyboard combo.

Nested actions
You can call other Actions from within Actions. While recording, select the action you'd like to incorporate in the Actions palette and click the Play button. The command is recorded as a single step.

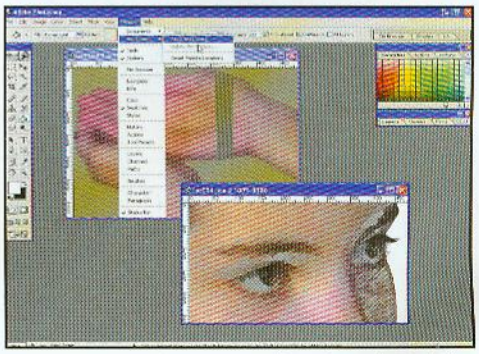
On the menu
Menu commands can be inserted into actions through the Insert Menu Item option from the Actions palette menu. This allows you to place menu commands into Actions that prompt for user input. Entire Action sequences can be built this way – and the results are easier to transfer to new documents.

Push-button Actions
Function Keys can be assigned to any Action. Select the Action you want to assign a key to and go to Action Options in the palette

Arranging the workspace

One way to cut down on using the mouse is to set up your workspace so that it most closely matches the way you work. To begin with, *Photoshop* can look pretty cluttered at times with all the default palettes in view. How many of them do you use though? You can now drag and drop those palettes that get in the way to the Palette Well at the top right of the interface.

Make sure you click and hold on the tab for the palette you want to rearrange. Palettes can also be docked with each other. You may, for example, wish to tear off and drop the Styles and Tool Presets palettes into the Palette Well, then group the remaining palettes together by dragging and dropping them to one dock. When you're happy with the arrangement, you can save the Workspace by going to Window>Workspace>Save Workspace. You'll also notice that there's an option listed that enables you to reset all palettes to their original locations. You can save as many workspaces as you like and, once they're in the menu, bind them to function keys using the Actions palette.



See page 8 for more details on customising workspaces.

down Shift at the same time and you'll be taken to the first or last brush in the set.

IMAGEREADY SHORTCUTS

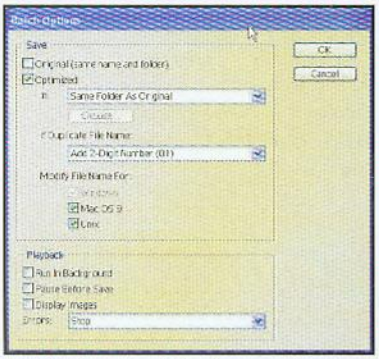
ImageReady switch
You can switch to *ImageReady* without clicking the icon at the bottom of the toolbar using Ctrl or Command Shift and M. Use the same shortcut to return to *Photoshop*.

One-step snapshot
You can disregard the *Photoshop* tip that suggests you take a Snapshot of your image before applying a complex action in *ImageReady*. The History palette in *ImageReady* records any Actions applied as a single step.

Quick views
Use Ctrl Y or Command Y to cycle through the available view modes in *ImageReady*. To preview an image directly in your default browser hit Ctrl Alt P or Command Option P. The function key F10 toggles the Optimise palette on and off in *ImageReady*.

Hidden batch
ImageReady has a batch command just like *Photoshop*, allowing you to process multiple files with a single action. Unlike *Photoshop*, you'll find it hidden away in the Actions palette menu rather than under File>Automate.

Action history
Create Actions quickly by dragging a command from the History palette, hitting F9 to activate the Actions palette and dropping it.



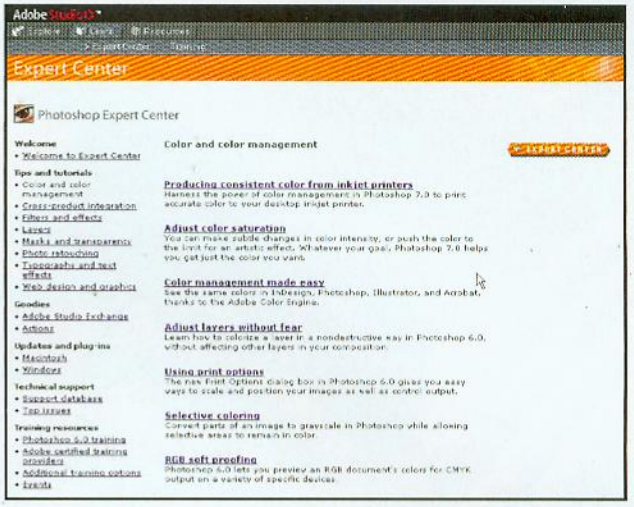
You'll find *ImageReady's* batch command nestling quietly in the Actions palette – ideal for optimising folders full of Web graphics.

WEB RESOURCES

Computer Arts
We don't want to blow our own trumpet. OK, we do. *Computer Arts Projects* and *Computer Arts* have been producing some of the best tips and tutorials on using *Photoshop* for over half a decade. You can revisit some of our best advice at [w] www.computerarts.co.uk.

Adobe Expert Centre
For downloads, tips, tutorials and other extras you can go straight to the horse's mouth. The Adobe Expert Centre requires a quick, free registration, but after that you're taken to a searchable archive of *Photoshop* goodness. Go straight to the *Photoshop* section at [w] http://studio.adobe.com/expertcenter/photoshop/main.html.

Digital Thread
Digital Thread is a site devoted to design. You'll also find tips on using *Photoshop* Actions and some handy sets of Actions compatible with *Photoshop 6.0*. They're available to download at [w] www.digitalthread.com.



Adobe's own online tutorials include partial file downloads and interface tips.

ActionFX
ActionFX appears to be a members-only site, but click on the Download link and you'll find over 50 actions available for free – including a small set optimised for *Photoshop 7*. See what they've got at [w] www.actionfx.com.

Elated.com
Head to Elated.com and you'll find five sets of free 'ActionKits' containing a total of 47 Actions. Stick around for the *Photoshop* tips in the Web and Multimedia section. It's all at [w] www.elated.com.

Grab almost 50 free Actions from Elated.com – and check out their *Photoshop*-designed Web interface kits while you're there.

Toolbar shortcuts

- M – Marquee
- L – Lasso
- C – Crop
- J – Healing Brush
- S – Clone Stamp
- E – Eraser
- R – Blur
- A – Path Selection
- P – Pen
- N – Notes
- H – Hand
- V – Move
- W – Magic Wand
- K – Slice
- B – Brush
- Y – History Brush
- G – Gradient
- O – Dodge
- T – Type
- U – Shape
- I – Eyedropper
- Z – Zoom
- X – Switch Colours
- Q – Toggle Standard/ Quick Mask Mode

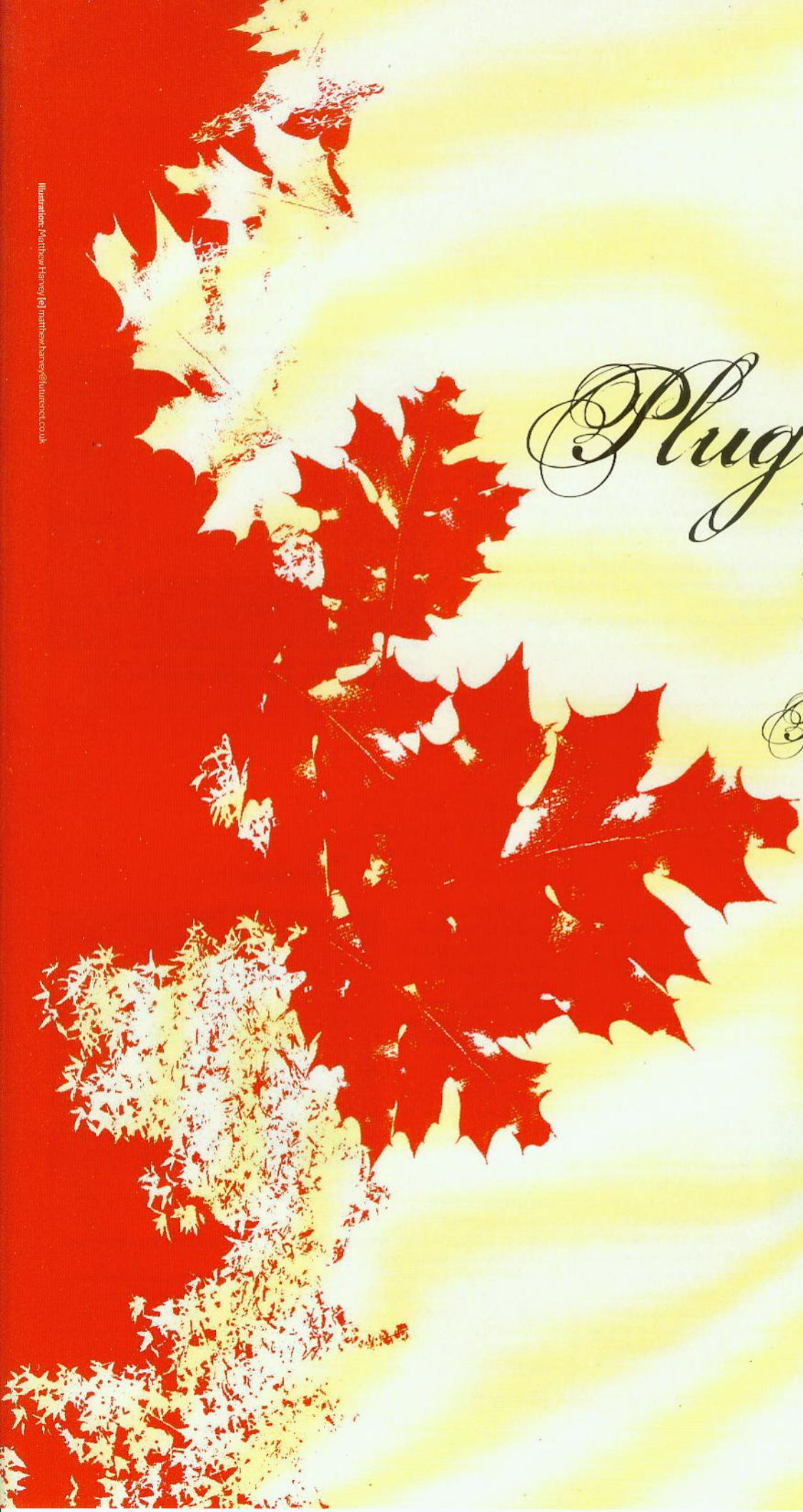


Illustration: Matthew Harvey [e] matthew.harvey@futurenet.co.uk

Plug it in...

There's a plug-in for every budget and every need. We assess ten of the best – from free ones to those costing over £100...

Photoshop has become synonymous with the plug-in. Without the development of third-party filters, the app would obviously still be a great image-editing tool, but would lose plenty of its versatility. Many image-editing professionals and *Photoshop* enthusiasts have relied on the ideas and enthusiasm of third-party developers, whether they be commercial companies or individuals making plug-ins for the fun of it.

There are hundreds of *Photoshop* plug-ins available today, all of which vary in functionality and price. You'll find some excellent freeware filters on the Web if you search hard enough, and there are a number of plug-ins costing £100+. We've rounded up ten products, categorising them by price – you'll find plug-ins here ranging from free to £140, so whatever your budget and image-editing needs, there's sure to be something here for you... >

Free plug-ins

Redfield Plugins

Price Free
Format PC only
Company Redfield
Tel Download online
Web www.redfieldplugins.com

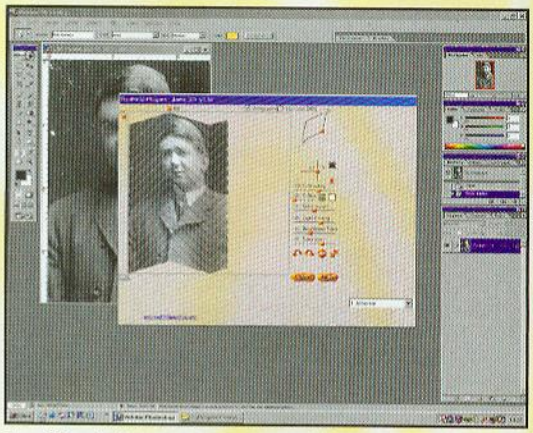
At Redfield's Website you have the opportunity to pick up some truly stunning *Photoshop*-compatible plug-ins. There are three free plug-ins to be found: Jama 3D, Lattice Composer and Seamless Workshop.

The slightly odd, yet well-presented Jama 3D enables you to quickly create corrugated patterns from your 2D images. These have a faux-3D feel to them, and using the excellent slider-based interface it's easy to deform a 2D image to give the effect of crumpled paper and so on. You can also download many presets from the Redfield site.

The second freeware plug-in is Lattice Composer. This enables you to apply a pattern, simulating a weave or other kind of fabric effect onto a 2D image. It can be great for text effects and textures for use in other compositions or 3D apps. The interface is, again, pretty easy to use.

Finally, there's Seamless Workshop, which is a decent enough alternative solution to *Photoshop 7's* native Pattern Maker filter.

Score **4**/5



Jama 3D makes it easy to create corrugated-like effects – and for a freeware plug-in it has an easy-to-use and well-presented interface.

Xero Filters 1, 2 and 3

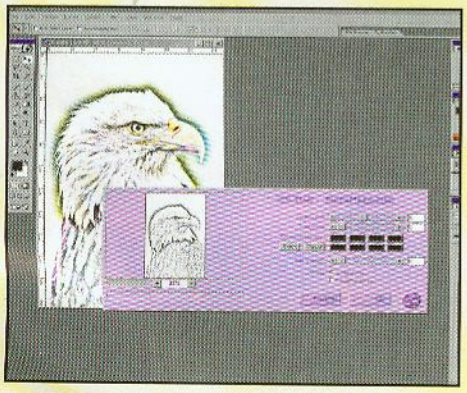
Price Free (contribution to charity link on site)
Format PC only
Company Xero Graphics
Tel Download online
Web www.xero-graphics.co.uk

There are three sets of plug-ins from Xero Graphics, the latest of which was released in March this year. In total, you can pick up 27 free filters here, and all are very good quality with easy-to-use slider-based interfaces.

Across the range, there are tools for adding painterly effects to your images (the Supersmooth filter in Set One works particularly well, giving your images a watercolour-like wash).

Effects in the first two sets range from serious blurring, mist and soft-focus tools to a variety of texture and abstraction filters.

The latest release, Set Three, really is where the filters start to appeal though. Bad Dream gives a nasty, yet strangely appealing misty colourisation to your image, whereas Emphasis handily enables you to emphasise certain colours in an image. For the grand total of absolutely nothing, these filter effects are superb – and at under 1MB each, they take no time at all to download from Xero's site at [w] www.xero-graphics.co.uk. It's just a shame that a set of plug-ins as good as this is only available for the PC platform.



Xero Graphics' excellent range of plug-in filters are free, easy to use and create fantastic effects – so what are you waiting for?

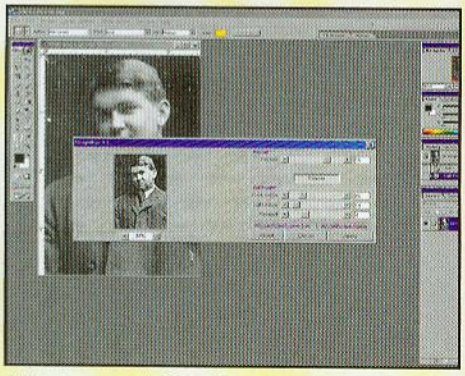
Score **4.5**/5

Simplifier

Price Free
Format PC only
Company Amphisoft
Tel Download online
Web http://photoshop.msk.ru/as/index.html

Although the effects created by Simplifier could almost certainly be created by using a combination of *Photoshop's* native functions, this freeware filter from Amphisoft is nevertheless worth downloading.

In short, it takes edges and blocks of colours and simplifies them, giving your creations a cross between a pastel and posterised look. We found the filter excellent for preparing bitmaps for tracing – taking the simplified result into *FreeHand*, *Illustrator* or *Streamline* gave us less complicated vector shapes.



Although not essential, Simplifier makes a good job of giving an image a painterly-like look by simplifying edges and colours.

The interface is by no means complicated, but you do have a surprising amount of control over your final image. You can, using sliders, add virtual water to your original image to give a watercolour-like effect. You can also adjust the spread of the water.

Overall, Simplifier is a decent enough freeware filter that can come in handy for quick paint-like effects and for simplifying bitmaps for use in a vector app. Check out the other freeware plug-ins offered by Amphisoft while you're at the site.

Score **3**/5

Plug-ins for under £10

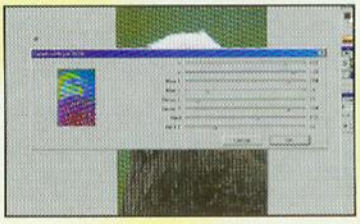
Andrew's Plugins Vol 11 – Mixed Blur

Price £4
Format PC only
Company Sapphire Innovations
Tel Buy online
Web www.sapphire-innovations.com

Andrew's Plugins Vol 11 – Mixed Blur is the latest in a long line from plug-in creator Andrew Buckle, the driving force behind the hugely popular Sapphire Innovations range of filters, actions, patterns, effects and, come to think of it, every kind of extra and add-on you could wish for.

Vol 11 of Andrew's Plugins carries on in the fine tradition of previous releases, adding 11 new filter effects. These include: Colourise, a simple yet effective way of adding a colour cast to an image; Cross Blur, which adds a strange, yet glowing blur effect; and Intensity, which whacks up the brightness and colour levels to create sharp and vibrant images.

There's nothing here that a seasoned Photoshopper couldn't do with the app's native tools, but Vol 11 is easy to use and the speed in which great results can be achieved makes it worth the cash.

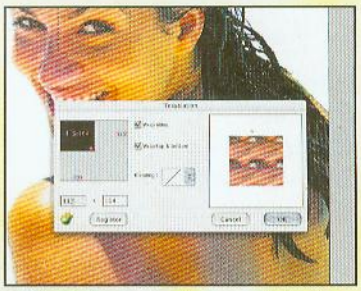


Andrew's Plugins Vol 11 features a diverse range of effects, from shocking gradient overlays to noisy, grainy blurs.

Score **4**/5

Tesselation

Price $15 (£9)
Format PC and Mac
Company Flaming Pear
Tel Buy online
Web www.flamingpear.com



The Tesselation interface is extremely simple and uncomplicated, enabling you to create tiled patterns with no obvious seams quickly.

Flaming Pear has a reputation for producing great quality plug-ins at extremely reasonable prices, and Tesselation is no exception. For the grand sum of £9, you can't expect a massive feature set – Tesselation is a relatively simple plug-in, making it easy to generate seamless patterns for 3D textures or background images.

While the native Pattern Maker filter in *Photoshop* offers a great amount of control for generating this kind of image, Tesselation proves a quick and easy replacement. The interface is made up of simply a preview pane, a 'big square' control and a number of checkboxes and drop-downs for fine-tuning your tiled pattern. The so-called 'big square' control enables you to quickly change the size of your tile. The red handle within the control enables you to interactively do this – or, if you wish (for accuracy), you can enter numbers into the fields below the control.

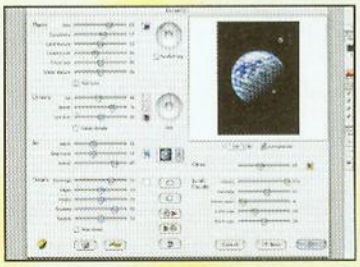
There are also controls for wrapping the top, bottom and sides of your pattern, and options for controlling the harshness of the seams. It works a treat.

Score **3**/5

Plug-ins from £10-£50

Flaming Pear Space Bundle

Price $40 (£24)
Format PC and Mac
Company Flaming Pear
Tel Buy online
Web www.flamingpear.com



Create magical moons and spectacular suns with Flaming Pear's trio – the perfect plug-in bundle for cheesy sci-fi or futuristic effects...

Comprising SolarCell, LunarCell and Glitterato, this bundle of Flaming Pear plug-ins is great value for anyone wanting to create sci-fi images.

SolarCell enables you to create realistic and fantasy suns. This kind of effect would take an absolute age in *Photoshop* without a plug-in – and, thankfully, the Flaming Pear offering is extremely easy to use and actually quite fun to play with. The familiar Flaming Pear interface features sliders giving you control over each and every part of the sun's appearance – you can also use the random dice button to mix things up a little.

LunarCell is much the same, enabling you to create planets and moons. You have control over Size, Land Texture, Crater Size, Cloud coverage and more – again you can use the randomise button if you wish to save your settings for use at a later date. To top it off, Glitterato enables you to create stars and galaxies.

Two of Flaming Pear's quality plug-in effects can be found on our cover CD.

Score **4**/5

Plugin Galaxy 1.5

Price $49.95 (£30)
Format PC and Mac
Company The Plugin Site
Tel Buy online
Web www.thepluginsite.com

Plugin Galaxy 1.5 is an excellent tool for producing special effects quickly – from metal to glass to page curls.

Plugin Galaxy from Harald Heim (otherwise known as The Plugin Site) has recently received an update to work with Mac OS X, and remains an excellent special effects tool. There are 21 plug-ins on offer here ranging from the oddly-named Bluuur, enabling you to create all sorts of radial and channel-mixed blurs, to Sunshine, a filter for creating realistic sunlight and sunset effects.

New to version 1.5 are, among other things, Page Curl, Star Field and four new Edge effects. The Page Curl filter is similar to AV Bros Page Curl Lite, enabling you to create semi-realistic page curls to layers. Star Field is similar to Flaming Pear's Glitterato, although the stars created here aren't as realistic as Glitterato's.

The interface remains consistent throughout the filters, a wealth of sliders giving you control, and each features a relatively large image-preview box. Overall, this is fantastic value and we recommend it to anyone who needs instant special effects.

Score **4.5**/5

Plug-ins for over £50

Mystical Lighting

Price $179 (£110)
Format PC and Mac
Company Auto FX
Tel Buy online
Web www.autofx.com

The latest release from revived plug-in supremos Auto FX deals with lighting – one of the hardest arts to fake in *Photoshop*, even with the native Lighting Effects filter. But this is no ordinary kind of lighting, this is Mystical Lighting (gasp). A cheesy name definitely, but this is a plug-in that can prove extremely useful, making it possible to add all sorts of subtle lighting effects, including glares, glows and mist-like effects, to an image in hardly any time at all.

Relatively fast in its operation, Mystical Lighting takes the form of a quite separate dialog when launched from the *Photoshop* filter menu. The interface enables the control of many different aspects of the lighting process, changing contextually when different presets are chosen.

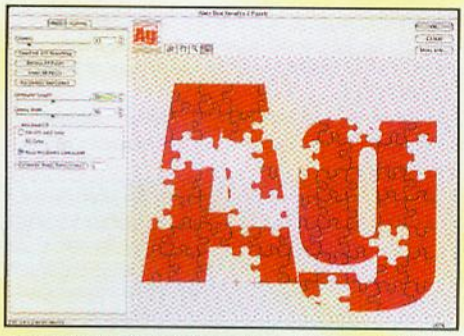
The Shadowing option proves particularly useful, enabling you to highlight areas or subjects in the foreground with little effort, and the interactive preview means you're always seeing what the final effect will look like. Overall, a neat tool that cries out for experimentation. Unfortunately, it's too expensive for what it is – pro users will be able to use *Photoshop's* native tools to much the same effect.

Mystical Lighting features the standard Auto FX interface, but operates quicker than some other offerings from the company.

Score **3**/5

Xenofex 2

Price £100
Format PC and Mac
Company Alien Skin
Tel (CU) 020 8200 8282
Web www.alienskin.com



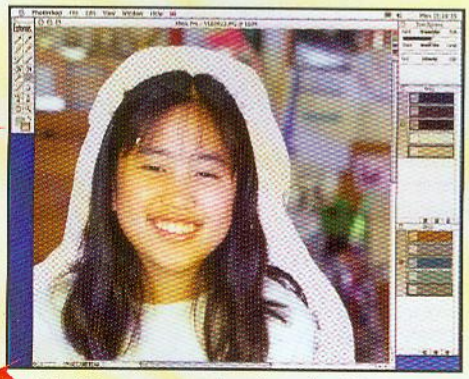
Xenofex 2 isn't going to be for everyone – the range of effects filters can sometimes produce cheesy and clichéd results. It's great fun though.

Alien Skin is renowned for filters that enable you to create crazy (and sometimes silly) effects in *Photoshop*. The brand new release of Xenofex keeps to the same guidelines, with 14 filters for producing all sorts of mad variations on your images.

The interface of Xenofex 2 is typical of Alien Skin, with a range of sliders and preset options. The filter interface also enables you to jump between the filters in Alien Skin without leaving the plug-in. Filters within the application include the following: Flag, which enables you to create a (semi) realistic waving flag from your image; Cracks, which does exactly what its name suggests; and Jigsaw, which is a filter for breaking up your image into puzzle pieces.

Our only real gripe with Xenofex is the speed at which it operates. It can prove to be extremely slow in previewing effects, therefore slowing down the creative process. If you need crazy effects, Xenofex 2 is definitely worth a try, but it's a little expensive at £100.

Score **3.5**/5



Mask Pro 3 improves on previous releases by adding better colour recognition tools and improved fine-tuning features.

Mask Pro 3

Price £140
Format Mac only
Company Extensis
Tel (CU) 020 8200 8282
Web www.extensis.com

Mask Pro has established itself over the years as a fantastic aid for the Photoshopper who does a lot of masking and cutout work. The job of making selections and masks, even with *Photoshop's* advanced toolset, remains to this day long-winded and, frankly, a little dull.

Mask Pro 3 aims to make masks a little less arduous, providing a number of new features that simplify the process. Once launched from the *Photoshop* Filter menu, the plug-in loads its own mini application. From here you use the tools to define colours to keep or drop. You then use the brush and fill tools on offer to begin making your mask – the filter adhering to the colour selections you made earlier and retaining or deleting areas of the image as appropriate.

A neat new tool in Mask Pro 3 is the Chisel tool. This enables you to reconstruct the edges of a mask, gradually adding or deleting pixels – using this tool, you can fine-tune the selection before sending it back to *Photoshop*. In addition, a new Blur tool softens the edge of a mask to blend it with background imagery. It's a little pricey, but once mastered this will definitely help with cutouts.

Score **4**/5

Expertise provided by Rob Carney, Reviews Editor of Computer Arts. [e] robert.carney@futurenet.co.uk.

COMPUTER arts projects INTERACTIVE

On the CD

Your guide to the free extras given away on this issue's cover disc...

FREE PLUG-INS

Zephyr and Electroplate by Flaming Pear

Get started with the slick pair of free plug-ins on our CD, worth $20 each...

Flaming Pear is known for the quality of its *Photoshop* plug-ins, having produced popular favourites such as SuperBladePro, Mr Contrast, Glitterato and LunarCell. This issue, we bring you Zephyr and Electroplate, and you can see below how both of them work.

If you like what you see, pay a visit to the Flaming Pear Website at **[w] www.flamingpear.com**. There you can find out more details about the company's entire range of creative plug-ins.

We have also given away a number of other Flaming Pear plug-ins in previous issues of *Computer Arts*. If you can get your hands on issue 84, check out Cumulus, Wreckage and Sphere Warp. Meanwhile, on issue 85 we featured Demitone 25, Demitone 50 and PixelTrash.

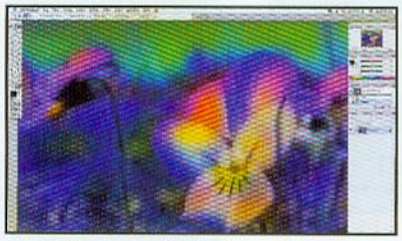
To get started using these two Flaming Pear plug-ins, follow our guides below.

Using Zephyr

Psychedelic colours and strange visuals with Zephyr...

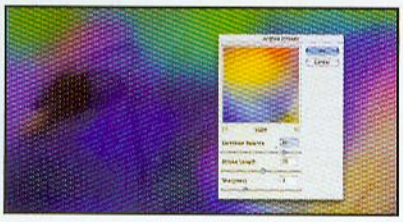
Installing your plug-ins

Installing your Flaming Pear plug-ins is extremely simple. From our cover CD, simply drag the plug-ins (file extension .8bf on the PC) into your *Photoshop* plug-ins directory. On the PC, this is found in the C://Program Files/Adobe/Photoshop directory (where C is your hard drive). On the Mac, you'll find this in the Applications/Photoshop directory on your Mac HD (or wherever you installed *Photoshop*). To uninstall the plug-ins, simply remove them from the folders.



1 Zephyr is a simple filter that can be used to generate psychedelic colours overlaying your images. There are no sliders or options as such – the filter simply applies vivid colours randomly. Open up b3_plants005.jpg from the Image*After folder on your CD. Apply the Zephyr filter from the Flaming Pear>Zephyr option in the *Photoshop* filters menu.

2 This is Zephyr at its most basic, but combining it with other, native *Photoshop* filters you can produce some pretty interesting and diverse effects. Duplicate the Background layer you've just applied the filter to and on the new layer apply a Gaussian Blur filter with the radius set to around 58. Take the opacity of the layer down to around 60 per cent – creating a hazy coloured light effect.

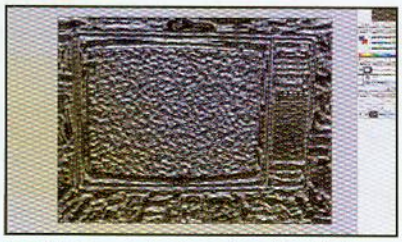


3 To add an artistic effect to our image, we can add an Angled Stroke filter to a new layer. Duplicate the Background layer once more. On the new layer you've created (named Background Copy 2 by default) apply the Angled Stroke filter from the Brush Strokes sub-menu in the Filter menu. Drop the Background Copy 2 layer in between the Background and Background Copy layers.

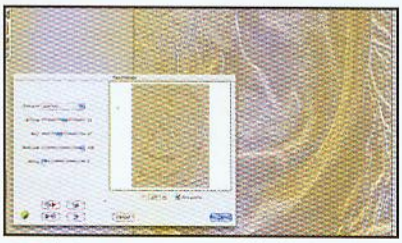
Using Electroplate

Create metallic embossed effects in no time at all...

1 Open up the image b3_household003.jpg from your cover CD. Using Flaming Pear's Electroplate you can quickly create a metallic, embossed-like effect – the resulting image looking like it's been crafted out of metal. Go to Filter>Flaming Pear>Electroplate. Take a quick look at the interface – bear in mind that the dice button creates a random effect, whereas the two CD icons enable you to save and reload certain settings.



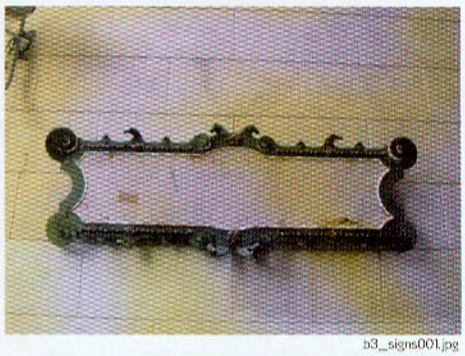
2 Now you can begin experimenting with the filter. To create a hard, edgy, effect, choose Steel from the Substance drop-down. Next, ramp up the Brilliance slider all the way to 100. Take down the Chunkiness slider and, to make sure that the edges remain crisp, slide the melting slider down to 0. The Melting slider blends the edges together, giving the appearance of liquid metal – experiment with this in conjunction with the Mercury preset.



3 Next, you can create a tin foil effect – as if an object has been pressed into a sheet of aluminium foil. Open up image b3_humanparts001.jpg (ear image) from our cover CD and rotate it 90 degrees clockwise. In Electroplate, choose the Aluminium preset from the drop-down. Slide the Brilliance down to around 50, the Chunkiness up to 100 and the Melting to 0. Set the Relief to around 40 and apply the filter.

b3_plants004.jpg

b3_humanparts001.jpg


b3_signs001.jpg

b3_plants017.jpg

b3_minerals001.JPG

b3_signs003.jpg

b3_plants005.jpg

b3_household007.jpg

b3_trees004.jpg

b3_trees007.jpg

PHOTOS AND TEXTURES

95 Photos by Image*After

FREE FOR YOU TO USE

b3_elements003.jpg

Try out this interesting collection of pictures from nature, human body parts, a broad array of plants and trees, and household objects. Go ahead and use these in your *Photoshop* projects...

Image*After is a new image library that specialises in photos and textures. The company was set up by three designers and is building up its database of files, ready for download from its Website. The amazing thing about the Image*After project is that the images are free. The creators of the site don't intend what's offered to be seen as stock photography, but as raw materials to be used in other works, such as what you create in *Photoshop*.

Image*After is just being set up and new images are being added to the site all the time. It's worth paying it a visit from time to time to see what's available. The good news is that you're free to use and edit the Image*After sample files on our CD as you see fit. You'll find all the images in the Image After folder on our disc. Visit the site at **[w] www.imageafter.com**.

COMPLETE PACKAGE

Eclipse RGB 3.1.5

Work on huge, hi-res RGB images, then upgrade to *Eclipse fullcolor* and save yourself a whopping £725...

Eclipse RGB is a fully fledged image-editing application that boasts a variety of superb tools. It's geared towards working with hi-res RGB images at huge sizes, and usually costs 290 euros (approx £200). However, we've teamed up with Formvision to bring you the application for absolutely nothing on our cover CD.

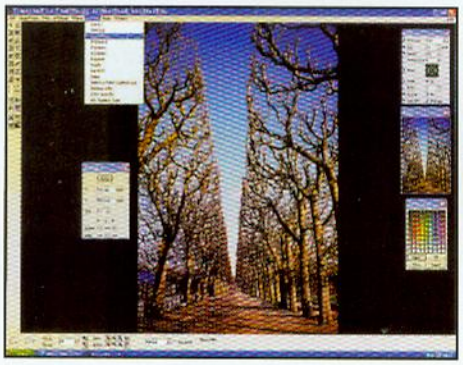
The program features many tools that will be of use to the creative or photographic professional – like ShapeLayers. These enable you to create Bézier-based clipping layers – effectively, a Bézier path with another image inside it – so you can mock up accurate compositions in no time at all. You can also add Text ShapeLayers to create filled text effects.

Eclipse also features a full set of masking tools, a panoply of superb effects and some great brushes. You can use the latter to create brush-based glows, effects, warps and so on. You can even 'paint' on filter effects. Additionally, Wacom tablets are supported.

It has some excellent colour correction tools, and the curve-based dialogs will be instantly familiar to users of *Photoshop*. You can also selectively modify (and replace) colours quickly and effectively.

The advanced memory-caching system enables you to handle very large, even billboard-size, images at 300dpi in real time. Feedback on all operations is in real time, too.

Finally, there are the excellent Blemish Removal and 3D Lighting tools to enjoy. The latter enables you to add professional lighting effects to your images quickly and with the minimum of fuss.



Register Eclipse

To get hold of your *Eclipse 3.1* licence key, you need to register online. Simply go to the Website below, fill in the relevant details and your key will be emailed to you. You'll also get a demo key for *Eclipse fullcolor*.

Upgrade and save

SAVE £725

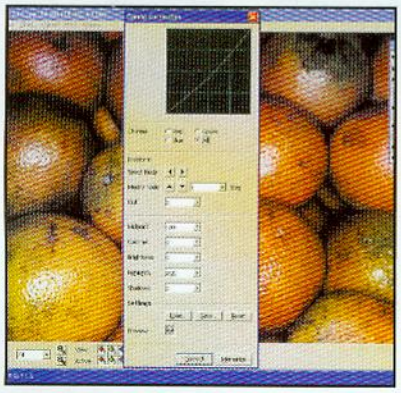
Upgrade to *Eclipse fullcolor* for the offer price of just 250 euros (£172)

We've teamed up with Formvision to offer you the chance of getting hold of *Eclipse fullcolor* for only 250 euros (approximately £172+tax). This high-end image-editing app, which normally retails at 1300 euros (£897+tax), enables you to work on extremely large, hi-resolution CMYK images (as well as RGB) and prepare them for printed output. To get your hands on *Eclipse fullcolor* and save yourself a massive £725 in the process, follow the simple link to Formvision's site below:

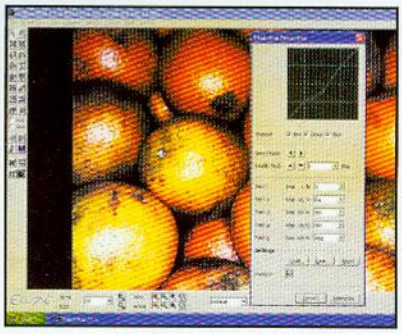
[w] www.aevermann.com/mymag/cas

Effects in Eclipse RGB

Work on large, high-resolution RGB images in real-time...



1 *Eclipse* uses advanced caching technology to enable you to work on huge, high-resolution RGB images without suffering loss of speed – even with a relatively old machine. Open the Image Source file IS219-016.jpg from our CD. Go to the Correct menu and choose Combo. First of all, we're going to make basic corrections to the image.



2 Using the *Photoshop*-like curves dialog that appears, you can individually edit Midpoint, Contrast, Brightness, Highlights and Shadows settings either by sliders or a Bézier curve. In addition, you can correct channels individually. Once you're happy, hit Apply, or Memorise for *Eclipse* to remember the settings for use at a later date (or for brush-based processing – see step 3). You can also correct contrast, dodge/burn and other properties by using the individual palettes in the Correct menu.

3 One of the most interesting elements of *Eclipse* is the brush tools. As well as creating painterly effects, you can paint filter effects onto your images. Go to the Effects menu and choose Gaussian Blur. Adjust the slider to around 90-100 and hit Memorise. The image returns to its former state. Next, from the Brush palette choose Effect from the Brush Type and scale your brush accordingly. Paint onto your image – notice how the strokes apply the same strength blur you just set. You can do exactly the same thing with the Correct tools – very handy for singling out untidy areas without making masks.

IMAGES

Photos by Image Source

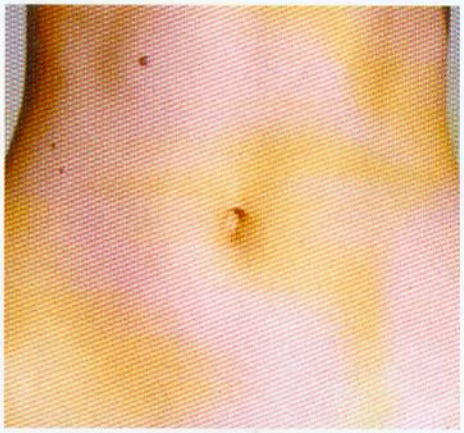
WORTH £2490

IS018-032.jpg

You'll find all ten of these high quality photographs from Image Source on our CD. They come from the Urban Surface, Bases & Spaces for Design and Light Abstracts collections...

Whether it's objects, people, scenes or action you need in a photograph, there's a good chance the Image Source collection has something to offer. The company has a huge selection of high quality shots with over 220 CDs in its collection, and over 20,000 single images on sale. CD sets cost between £399 and £499, while if you order single images, they'll start at £49 at low resolution right up to £249 for a super high-res image that can be used at up to A3 size. The images on our CD are either A3 or A4 size and are in the Image Source folder.

Impressive new images are constantly being added to The Image Source collection — see the latest inclusions when you visit **[w] www.imagesource.com**. Please be aware that these Image Source images are for restricted use on a promotional and educational basis, not for re-use or resale to a third party or for commercial gain. All rights reserved Image Source Limited.



IS085-025.jpg

IS208-011.jpg

IS223-042.jpg

IS018-015.jpg

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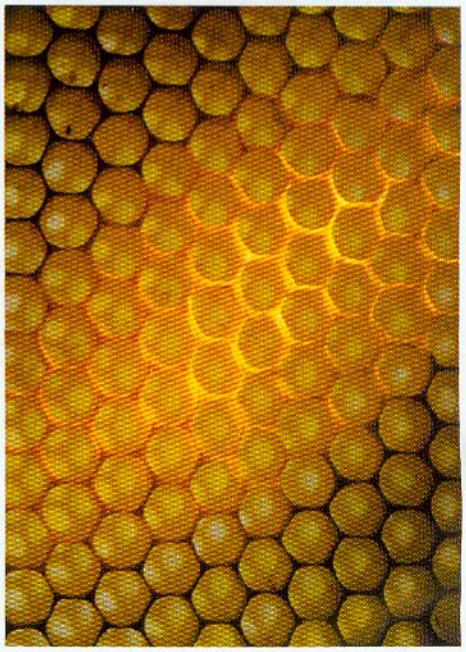
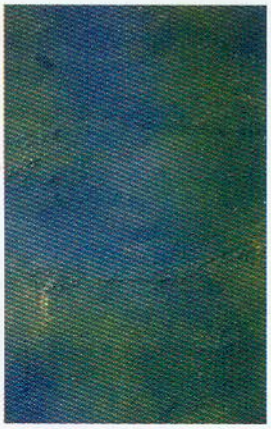
IS219-016.jpg



EV003-042.jpg



IS208-042.JPG

202_041.JPG

BOOK REVIEWS

THE HIDDEN POWER OF PHOTOSHOP ELEMENTS 2

Author **Richard Lynch** Publisher **Sybex** Price **£29.99** ISBN **0-7821-4178-1**

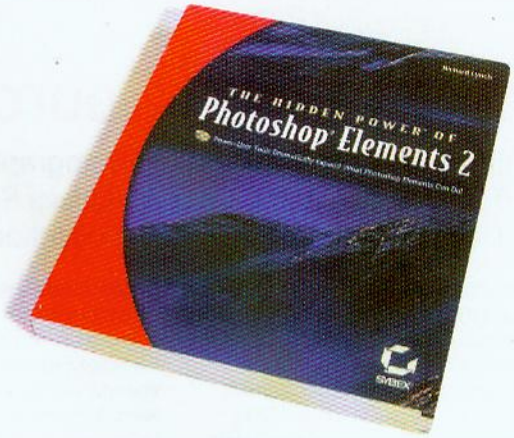
This book is aimed firmly at the intermediate user. To get the most from it, you need a good understanding of each of *Elements*' foundation tools as well as know how to work with colour.

After a brief introduction to the *Elements* interface, you get a close look at each of the components that constitutes your image, including tone, contrast, colour manipulation and image composition. Concluding chapters cover output to paper and the Web.

It's perfect for the digital photographer because much of the detailed information here is written for them, although this isn't stated overtly. The depth of information on all aspects of colour control is astonishing. Anyone who needs detailed control over every aspect of their images will revel in this book.

The tutorials are detailed and require a high level of understanding of not only *Elements*' tools but also the theory that supports each type of manipulation. If you have a need to control the colour of your images in particular, you don't need to look any further than this.

VERDICT **4.5**/5



PHOTOSHOP 7 WOW! BOOK

Author **Jack Davis** Publisher **Peachpit Press**
Price **£37.99** ISBN **0-321-12397-2**

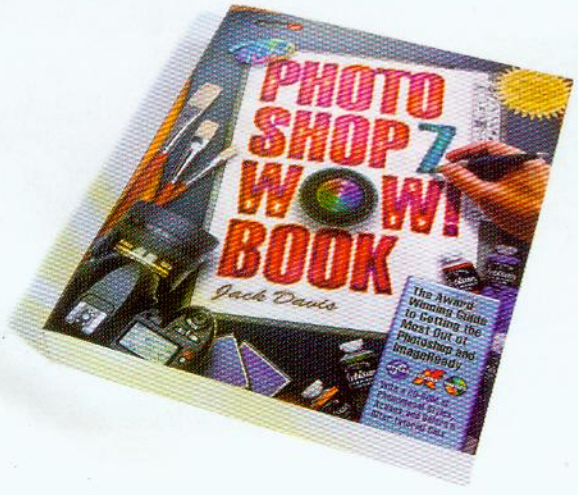
Presented in full-colour, this latest edition in the Wow! series is equally useful for the *Photoshop* beginner or professional, because the information is structured to offer basic skills as well as options for power users.

Beginners should read Chapter One because this provides a good foundation in the conventions of the *Photoshop* interface. The remaining eight chapters then move the reader through themed sections covering colour, retouching, filters and special effects before moving on to designing for the Web.

As each chapter follows a similar layout, you can easily assimilate the information on offer. It can be read sequentially or dipped into when you need the answer to a specific question. The tutorials are concise, but are also technical in some aspects, which could confuse the absolute beginner.

This series of books still remains one of the best visual learning tools for any *Photoshop* user. Intermediate users will gain the most from the information here, because it's a thorough and comprehensive guide that explains all the new tools in full.

VERDICT **4.5**/5



PHOTOSHOP 7 LEARNING STUDIO

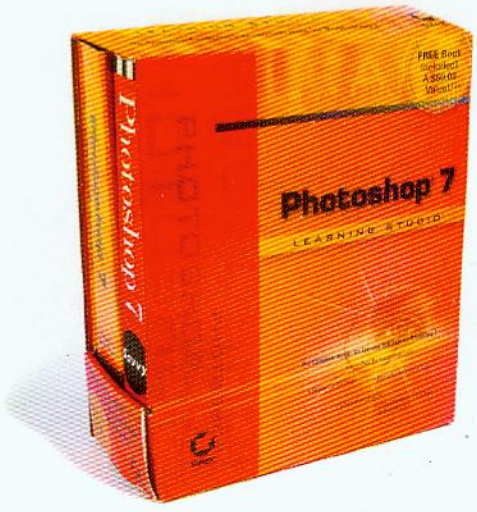
Author **Steve Romaniello** Publisher **Sybex**
Price **£89.99** ISBN **0-7821-4185-4**

If you've got any of the Lynda Weinman series of H.O.T books then you'll have marvelled at the use of QuickTime movies to teach some of the more complex aspects of *Flash* or *Dreamweaver*. This package takes this concept a stage further and provides a complete learning environment for all *Photoshop* novices.

The CD-ROM uses an Internet browser as its interface, which allows you to easily navigate to the information you're looking for. The quality of the teaching is high, but absolute beginners may feel a little lost because many of the technical aspects of *Photoshop* are not explained fully. You'll need more than a general overview of the package to get the most from this course.

The accompanying book – *Photoshop 7 Savvy* – is one of the better ones currently available, and does in itself present an excellent *Photoshop* course. Combining the book – which is also on the CD – with an interactive CD-ROM does offer an innovative way to learn. However, the price point for this package may be a stumbling block for many users.

VERDICT **4**/5



PHOTOSHOP 7 AT YOUR FINGERTIPS

Authors **Jason Cranford Teague** Publisher **Sybex**
Price **£29.99** ISBN **0-7821-4092-0**

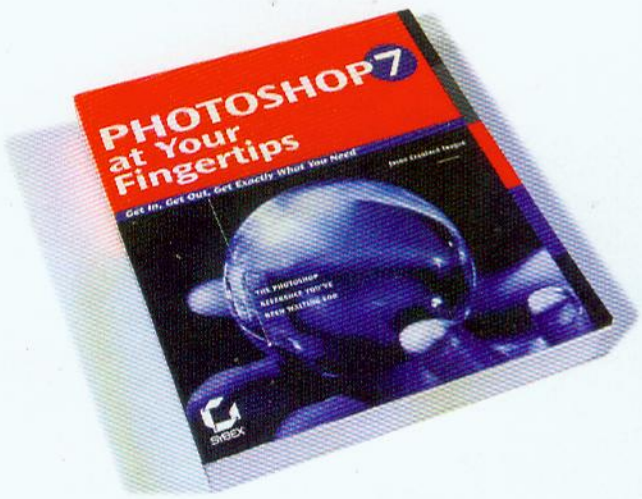
To say that this covers every aspect of the program would be an understatement. You'll find at least a description of each and every tool and menu that *Photoshop* has to throw at you and, as a result, the book is perfect as a reference tool.

However, understanding *Photoshop* theory is a far cry from actually producing images that you can be proud of. If you're looking for a tutorial-based manual, then look elsewhere; but if you need a guide that you can dip into to discover how a feature or tool works, this book will more than suffice.

The massive amount of information presented here has been well thought through. The cross-referencing of each tool and menu allows you to see *Photoshop* in the wider sense, and can lead you to time-saving shortcuts as well as improved productivity.

Its academic approach may be too dry for some tastes, but if you need a reference book that you can be assured will show you where to locate a tool or menu, this is the one for you.

VERDICT **4**/5



PHOTOSHOP 7 POWER SHORTCUTS

Authors **Michael Ninness** Publisher **New Riders**
Price **£15.50** ISBN **0-7357-1331-6**

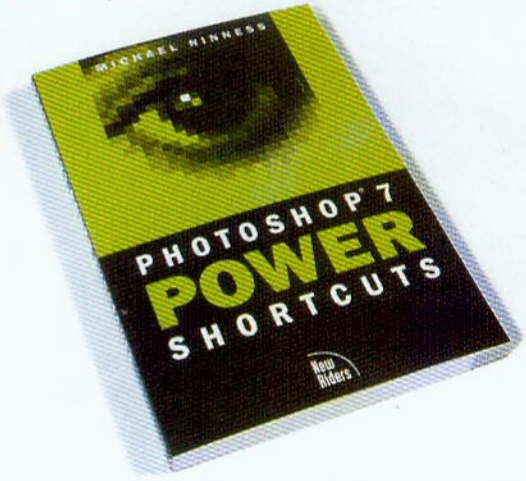
While inexperienced *Photoshop* users reach for the mouse, more seasoned users just tap the keyboard and control *Photoshop* with shortcuts and recorded actions.

Here, for the first time, is a book that catalogues each and every one of these shortcuts for *Photoshop* and *ImageReady*, many of which you won't find listed on the program's interface or in the official user manual. At first glance, it appears to be quite an uneventful book, but you soon begin to appreciate the wealth of information gathered within its pages.

Divided into themed sections that cover the most often required tasks, this isn't something to be read cover to cover – you'd never absorb all the information in one sitting. It's well laid out and offers shortcuts for versions 5.5, 6.0 and 7.0 of *Photoshop* as well as versions 3.0 and 7.0 of *ImageReady*.

Locating the shortcut you need is straightforward, allowing you to quickly build up a repertoire of quick keys that you'll soon benefit from. This is a resource manual to augment your existing workflow, and offers some simple but effective ways to enhance your overall efficiency.

VERDICT **4**/5



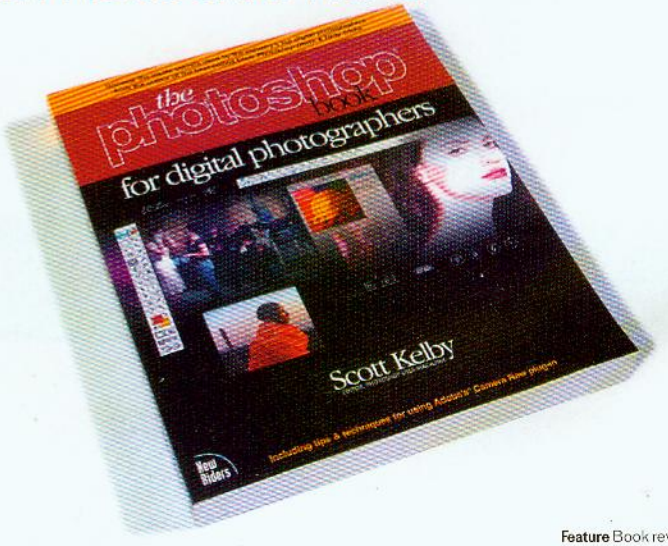
THE PHOTOSHOP BOOK FOR DIGITAL PHOTOGRAPHERS

Author **Scott Kelby** Publisher **New Riders**
Price **£30.99** ISBN **0-7357-1236-0**

This promises a great deal, and from the very first page delivers on that promise – every *Photoshop* user should read this as soon as possible. It's not a traditional *Photoshop* manual – you won't find anything so ordinary as introductory chapters on the *Photoshop* interface, or any information about which digital camera to buy.

The intermediate to professional user will gain the most from this book. However, each tutorial is written to allow even the beginner to produce astonishing results. Presented here is pure unadulterated information to allow you to perform exactly the tasks you need to produce professional-looking images.

The Photoshop Book outlines the key techniques that every digital photographer needs to master, showing you how to enhance your images to get the best and most striking results.

Ultimately, this manual offers anyone – not just digital camera users – a set of well-designed tutorials that can be followed easily, enabling you to take a quantum jump in the quality of the images you're producing.

VERDICT **5**/5